

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

	X
	:
NATURAL RESOURCES DEFENSE	:
COUNCIL, INC.; RARITAN	:
BAYKEEPER, INC.; ANDREW	:
WILLNER; and GREENFAITH,	:
	<u>OPINION AND ORDER</u>
	:
Plaintiffs,	:
	05 Civ. 762 (SAS)
	:
- against -	:
	:
UNITED STATES ARMY CORPS OF	:
ENGINEERS; and COL. RICHARD	:
POLO, JR., in his official capacity as	:
Commander and District Engineer,	:
United States Army Corps of Engineers,	:
New York District,	:
	:
Defendants.	:

SHIRA A. SCHEINDLIN, U.S.D.J.:

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I. INTRODUCTION

This opinion resolves the remedial phase of litigation stemming from the failure of the United States Army Corps of Engineers and Col. Richard J. Polo, Jr., as Commander and District Engineer of the Corps' New York District, (collectively the "Corps"), to take a "hard look" under the National Environmental Policy Act ("NEPA")¹ at the consequences of a project to deepen shipping channels in the New York-New Jersey Harbor ("Harbor") through dredging and blasting of the Harbor floor.² Plaintiffs, a group of environmental organizations and concerned citizens, claimed that the Corps violated NEPA by not considering the impact of the Corps' Harbor Deepening Project ("HDP") on the United States Environmental Protection Agency's ("EPA") plan to study decades of industrial pollution and evaluate possible cleanup options for contamination in the Harbor. In an earlier opinion, I found that the Corps had violated both NEPA and the Administrative Procedures Act ("APA").³ Plaintiffs now request that the Court

¹ 42 U.S.C. § 4321 et seq. (2006).

² Two interested parties, Donjon Marine, Inc. ("Donjon"), a dredging company, and New York Container Terminal, Inc. ("Container Terminal"), have been granted permission to intervene as defendants.

³ 5 U.S.C. § 500 et seq. (2006). For a list of acronyms used in this Opinion see the Glossary of Acronyms at the end of the Opinion.

order the Corps to prepare NEPA-compliant documentation pursuant to a schedule, with specific instructions on the elements and process, for completing the documentation. Plaintiffs also request an injunction prohibiting future contracting in connection with the HDP until such time as the Court approves the Corps' final NEPA documentation.⁴

II. BACKGROUND

The facts underlying this case are comprehensively set out in my Opinion and Order of August 5, 2005 (“August 5 Opinion”).⁵ Briefly, the HDP is intended to open the Harbor to the newer, larger, and deeper-bottomed cargo vessels on which the modern shipping industry depends. As part of the HDP, the Corps has been authorized to conduct the Kill Van Kull 45’ Deepening Project, the Arthur Kill 41/40’ Deepening Project, the Port Jersey 41’ Deepening Project, and the 50’ New York and New Jersey Harbor Deepening Project.⁶ In 2002, Congress

⁴ See Memorandum of Law in Support of Plaintiffs’ Request for Injunctive Relief (“Pl. Mem.”) at 2.

⁵ Familiarity with the August 5 Opinion is assumed. See *Natural Res. Def. Council, Inc. v. United States Army Corps of Eng’rs*, 399 F. Supp. 2d 386, 411-12 (S.D.N.Y. 2005).

⁶ See Declaration of Jenine Gallo, Army Corps Lead Wildlife Biologist and Section Chief in the Environmental Branch of the Planning Division, in Opposition to Plaintiffs’ Motion for a Preliminary Injunction ¶¶ 4-6, Administrative Record (“AR”) 48:16220-21. Citations to the AR refer to the

ordered the Army Corps to consolidate each of these projects into one overall deepening project, known as the HDP.⁷

Part of the HDP will cut through highly contaminated sections of Newark Bay and surrounding waterways. This contamination is the result of years of heavy industrial use of the Bay and its tributaries. In particular, the Bay is contaminated with the by-products from the manufacturing of Agent Orange at the Diamond Alkali Chemical Plant,⁸ on the Passaic River, during the Vietnam War.

On February 13, 2004, the EPA entered into an AOC, which added Newark Bay to the Diamond Alkali Superfund Site, as the “Newark Bay Study Area of the Diamond Alkali Superfund Site” pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”).⁹ Under the direction of the EPA, Tierra Solutions, Inc. (“Tierra”) is carrying out a Remedial Investigation/Feasibility Study (“RI/FS”) on behalf of Occidental Chemical Corporation, successor to Diamond Shamrock Chemicals Company,

administrative record before this Court during the initial liability phase.

⁷ See *id.* ¶ 6, AR 48:16221.

⁸ The Diamond Alkali Company operated the plant between March 1951 and August 1969. In 1983, after an intervening name change, the company was renamed Diamond Shamrock Chemicals Corporation. See Administrative Order on Consent (“AOC”) at 7, AR 48: 0016136.

⁹ 42 U.S.C. § 9601 et seq. (2006).

pursuant to the terms of the AOC. The RI will determine the extent and nature of contamination in the Bay, and the FS will evaluate possible cleanup options based on what is learned from the RI.¹⁰ This process also contemplates the preparation of a Natural Resources Damages Assessment for the Diamond Alkali Superfund Site, in which natural resources trustees (the National Oceanic and Atmospheric Administration, the U.S. Fish and Wildlife Service, and the New Jersey Department of Environmental Protection) will determine the injury to the natural resources, establish a plan for restoration of the natural resources, and determine compensation to the public for loss of services from the resources.¹¹

A. August 5 Opinion

Plaintiffs claimed that the Corps acted arbitrarily and capriciously, in violation of NEPA and the APA, by proceeding with the HDP without preparing a Supplemental Environmental Impact Statement (“SEIS”) to consider the possible detrimental effects of the HDP dredging on the RI/FS. The August 5 Opinion

¹⁰ See Declaration of Dr. Peter L. DeFur, environmental scientist, in Support of Plaintiffs’ Request for Injunctive Relief (“DeFur Decl.”) ¶ 9 (noting that the FS provides for the “development and screening of remedial alternatives and detailed analysis of remedial alternatives”).

¹¹ See Lower Passaic River Restoration Project and Newark Bay Study: Draft Community Involvement Plan (August 2005) at 9-11, United States Army Corps of Engineers Administrative Record Documents for Remedy Phase, Volume I (“USACE I”): 0020337-39.

granted summary judgment to plaintiffs, holding that the “Corps failed to take a hard look at the potential impacts of dredging in the HDP on the RI and at methods of coordination with the EPA that might reduce those impacts, if any, and that the Corps’ decision to proceed without an SEIS in the absence of such a hard look was arbitrary and capricious.”¹² I found the Corps’ NEPA review deficient for the following reasons:

- The Corps “failed to give serious consideration to the potential impacts of dredging on sampling for the RI/FS, or the means by which those impacts could be minimized before awarding the Arthur Kill dredging contract.”¹³
- “[T]he record did not contain any substantive discussion of the form coordination between the EPA and the Corps will take, or how the effectiveness of that coordination would be monitored.”¹⁴
- The Corps did not do any “further analysis of the possible impact of dredging on the RI/FS” before March 11, 2005

¹² *Natural Res. Def. Council, Inc.*, 399 F. Supp. 2d at 411-12.

¹³ *Id.* at 408.

¹⁴ *Id.* at 410.

when the Corps awarded the first contract for dredging in the Kill van Kull Channel.¹⁵

Based on these findings, I concluded that “the Corps must assess the impact of its dredging on the sampling required for the RI/FS before committing to a particular method of dredging, rather than waiting until dredging interferes with the sampling and causes unrecoverable delays to the potential cleanup process.”¹⁶ Finally, I ordered the Corps to “give full consideration to how cooperation between the EPA and the Corps can minimize the effects of dredging on the RI/FS before committing to a particular method of dredging, not after problems arise.”¹⁷

By agreement of the parties, I bifurcated the issues of liability and remedy.¹⁸ Having found liability, I now address the appropriate remedy.

B. Record Under Review During the Liability Phase

Beginning in 1980, the Corps produced over a dozen separate NEPA documents on the HDP. In December 1999, the Corps prepared a Final Environmental Impact Statement (“1999 FEIS”) to “identify, screen, evaluate and

¹⁵ *Id.*

¹⁶ *Id.* at 388-89.

¹⁷ *Id.* at 389.

¹⁸ *See id.* at 389.

recommend a plan for channel improvements throughout the Port of New York and New Jersey.”¹⁹ In January 2004, the Corps assessed any changes to the project due to the consolidation of the dredging contracts into the HDP and produced a Limited Reevaluation Report and Environmental Assessment (“2004 EA”) that resulted in a Finding of No Significant Impact (“FONSI”).²⁰

The August 5 Opinion considered only the limited “administrative record compiled by [the Corps] when it made the decision” under review.²¹ In an order dated May 9, 2005, I found that the Corps made two decisions that were relevant to a review of its NEPA compliance. On December 29, 2004, the Army Corps awarded a contract with respect to the Arthur Kill 40/41 project without preparing an SEIS. On March 11, 2005, the Corps awarded a contract for the S-KVK-2 project in the Kill van Kull Channel, a project which the Corps concedes is part of the HDP, again without reviewing the designation of the Newark Bay as a Study Area (“NBSA”) and the impact of the dredging on the RI/FS. The Corps’ NEPA documentation as of those dates, including the 2004 EA and the 1999 FEIS,

¹⁹ December 1999 FEIS, New York and New Jersey Harbor Navigation Study (“1999 FEIS”), AR 11:2581.

²⁰ See 2004 EA, AR 3: 0000324-578.

²¹ *National Audubon Soc'y v. Hoffman*, 132 F.3d 7, 14 (2d Cir. 1997).

was submitted to the Court for consideration in the liability phase.

C. The Remedy Phase

During the pendency of this action, the Corps began to evaluate the potential impacts of the deepening projects on the RI/FS in the form of a Draft Environmental Assessment on the Newark Bay Area of the New York and New Jersey Harbor Deepening Project (“Draft EA”). The Draft EA was published in June of 2005.²² It found that the designation of Newark Bay as a CERCLA Study Area did not alter the “existing characterization of resources in the study area or the proposed dredging plans and therefore [had] no effect on the previous analysis of impacts presented in the 1999 [FEIS] or the 2004 EA.”²³ The Draft EA also relied on promises of coordination between the Army Corps and the EPA to ensure that no significant impacts to the RI/FS would occur as a result of the dredging or on the HDP as a result of the RI/FS.²⁴

In September 2005, after this Court’s liability ruling, the Corps announced that it intended to publish an Amendment to the Draft EA (“Draft

²² See Draft EA, USACE I: 0020084.

²³ *Id.* at i, USACE I: 0020086.

²⁴ See *id.* (“As a result of continued and extensive USACE coordination with the EPA regarding the potential effects of each project on the other (i.e. HDP and EPA’s RI/FS) no significant impacts to the RI/FS or the HDP are expected.”).

Amendment”) to further evaluate the impacts of the HDP on the RI/FS and the “methods of coordination with EPA that might reduce those impacts.”²⁵ Because the sampling plans and the HDP are both time-sensitive, the Court ordered immediate briefing of the remedy issue once the Draft Amendment was published.

The Draft Amendment was published on September 30, 2005 and was intended to provide a qualitative and quantitative analysis of the potential effects of the Corps’ dredging activities on the NBSA Remedial Investigation Work Plan (“RIWP”).²⁶ The Draft Amendment also set out a coordination plan, intended to help the EPA and Corps avoid, minimize, and/or mitigate any possible effects of the dredging on the sampling work and ensure that the goals of the RI/FS are met.²⁷

In October 2005, plaintiffs sought injunctive relief, arguing that the Corps had not cured the NEPA violations found by the Court. I held a hearing on December 8, 2005, at which time the Corps promised to publish the Final EA by December 31, 2005. Based on that representation, I postponed consideration of

²⁵ 8/26/05 Letter from Ramon E. Reyes, Assistant United States Attorney, Counsel to the Corps, to the Court at 1-2.

²⁶ See Draft Amendment, USACE II: 0020998.

²⁷ See *id.* at 4, USACE II: 0021006.

the appropriate remedy until after the Final EA was published and the parties had an opportunity to address its adequacy. On January 6, 2006,²⁸ the Corps published the Final EA and Final Amendment to the EA (collectively the “EA”).²⁹ The EA concludes that “the effects of dredging on the ability of [the] USEPA to achieve the RIWP study goals are determined to be insignificant and to have no material bearing on EPA’s decision-making process regarding potential remedies.”³⁰ The EA again recommends a FONSI for the dredging projects, thus making the preparation of an SEIS unnecessary.³¹

On January 27, 2006, plaintiffs renewed their request for injunctive relief and filed a supplemental memorandum of law. The Corps also filed a supplemental memorandum of law in opposition to plaintiffs’ request. Both parties addressed the portions of the Final EA and the Final Amendment to the EA that were revised from the draft versions.

For purposes of the remedy phase, a court is not limited to the

²⁸ The Corps obtained a one-week extension in the publication schedule for the Final EA and for the briefing schedule.

²⁹ See EA, USACE IV: 0022000; Amendment to the EA, USACE IV: 002106.

³⁰ Amendment to the EA at 47, USACE IV: 0022156.

³¹ See EA at ii, USACE IV: 0022003.

administrative record.³² Evidence falling outside the administrative record is relevant to whether relief should be granted if such evidence shows “that an agency has rectified a NEPA violation after the onset of legal proceedings.”³³ Thus, the parties agreed to submit to the Court all materials concerning the Corps’ NEPA compliance that were before the agency between the close of the administrative record and the date of the Final EA. This included, *inter alia*, the RIWP, multiple emails between the Corps and the EPA, sampling schedules, memoranda of record on coordination meetings, public comment received by the Corps in response to the Draft EA and the Draft Amendment, the Corps’ Draft EA, Amendment to the Draft EA, and the Final EA. These documents were fully submitted, with supplements,³⁴ by February 17, 2006.

D. The NBSA RIWP and Ongoing Deepening Projects

In September 2005, Tierra published “revision 1” of the RIWP, laying

³² See *National Audubon Soc'y*, 132 F.3d at 15.

³³ *Friends of the Clearwater v. Dombeck*, 222 F.3d 552, 560 (9th Cir. 2000). *Accord D'Agnillo v. United States Dep't of Hous. & Urban Dev.*, 738 F. Supp. 1454, 1455 (S.D.N.Y. 1990), *aff'd*, 923 F.2d 17 (2d Cir. 1991) (considering affidavits submitted during a supplemental briefing phase in order to decide whether an injunction should issue regarding environmental harm).

³⁴ See, e.g., 1/11/06 Memorandum for Record, NBSA Coordination Team Meeting; 2/16/06 Memorandum for Record, NBSA Coordination Team Meeting, USACE IV: 0022591, 0022612.

out goals and objectives for the EPA's study.³⁵ An essential component of the study will be to perform sampling on surface sediment, subsurface sediment, and water in the Bay to determine the distribution and concentration of contamination. The study will also help develop a historical record of sediment deposition, as any record of sediment deposition which may have existed has been modified or eliminated by substantial dredging activities in the past.³⁶ Under the current plan, the RI has three goals:

- RI Goal 1: Determine the horizontal and vertical distribution and concentration of [chemicals of potential concern ("COPCs")]³⁷ for the Newark Bay Study Area sediments.
- RI Goal 2: Determine the primary human and ecological receptors . . . of [COPC] contaminated sediments in the Newark Bay Study Area.
- RI Goal 3: Determine the significant direct and indirect continuing sources of the [COPCs] to the sediments in the Newark Bay Study Area.³⁸

A phased sediment investigation sampling program is planned to address the first goal. The primary objectives of this first phase of sampling are to:

- support further development of the preliminary conceptual site model

³⁵ See RIWP, USACE III: 0021138; EA at 8, USACE IV: 0022012.

³⁶ See RIWP at Executive Summary ("ES")-5, USACE III: 0021158.

³⁷ The COPCs to be studied include: "polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, pesticides, and metals." *Id.* at 1-1, USACE III: 0021163.

³⁸ *Id.* at 1-2, USACE III: 0021164.

and verify that the geomorphic areas used for sampling are appropriate for future programs;

- estimate the approximate depth of a critical ‘horizon’ in the sediment bed . . . ;
- better understand broad patterns of constituents in both the surface and subsurface sediments, and attempt to preliminarily identify ‘hot spots’ through statistical analyses; and
- confirm that the current analytical chemistry and radiochemistry suite is appropriate for future testing; and
- determine data needs for Phase II.³⁹

Sampling under the first phase of this sediment investigation began on October 24, 2005.⁴⁰

In addition, deepening projects in the Arthur Kill and Kill van Kull contract areas are currently either underway or already complete. The Corps awarded the first contract for dredging in the Arthur Kill Channel on December 29, 2004.⁴¹ It has since proceeded with the Kill Van Kull 45’ deepening project.⁴² In August 2005, the Corps began to coordinate its dredging activities with EPA’s sampling plans in areas affected by these two projects. As a result of consultations

³⁹ *Id.* at ES-6, USACE III: 0021159.

⁴⁰ *See* 10/19/05 Letter from Ramon E. Reyes to the Court.

⁴¹ *See* 12/29/04 Letter from Corps to Donjon, AR 39:15000-02.

⁴² *See* 2/16/06 Memorandum for Record, NBSA Coordination Team Meeting, USACE IV: 0022612 (noting that the Arthur Kill 1 contract is “essentially complete,” the KVK-2 contract is “about 36% complete,” and the Arthur Kill 2/3 contract is “about 52% complete”).

with the EPA, the Malcolm Pimie consultants, and the technical project managers to the EPA on the Newark Bay Study, the Corps concluded that the deepening projects would not affect the initial sampling that the EPA planned for the fall of 2005.⁴³ The Corps and the EPA have since held regular monthly meetings.⁴⁴

E. The January 2006 Final Environmental Assessment

There are several aspects of the EA worth describing in some detail. These include the EA's assessment of the potential impacts of the HDP on the RI/FS, analysis of the cumulative impact of the dredging, alternatives analysis, and coordination and monitoring provisions.

⁴³ See 8/26/05 Memorandum for Record, Appendix C, Draft Amendment, USACE II: 0021122. The Malcolm Pimie technical consultants informed the Corps that they had reviewed the dredging activities in the NBSA and concluded (with EPA's concurrence) that "deepening projects will have no significant adverse impact on EPA's upcoming sampling in those contract areas." *Id.* The consultants stated that of the three types of sampling planned for the fall and winter of 2005, dredging would not affect them. For one type of sampling, biological activity zone, the EPA noted it is not planning on taking samples in an area that was being actively dredged this fall or winter. For two other types of sampling, sediment coring and bathymetry, the technical consultants explained that sampling is not affected by dredging for various reasons and that data can be collected around operating dredging equipment. *See id.*

⁴⁴ See, e.g., 9/12/05 Memorandum for Record: Coordination Team Meeting, 9/8/05 Coordination Team Meeting, 9/14/05 Memorandum for Record: Additional NBSA Coordination-Sediment Sampling Points, 10/24/05 Memorandum for Record: Coordination Team Meeting, 11/9/05 Memorandum for Record: Coordination Team Meeting, 12/21/05 NBSA Coordination Plan, Appendix C, Amendment to the EA, USACE IV: 0022247-87.

1. Assessment of the Potential Impacts of the HDP on the RI/FS

The Corps concludes that the dredging will not have significant impacts on the RI/FS sampling.⁴⁵ The Corps' discussion is divided into three geographical regions: (1) navigational channels, (2) port channels, and (3) areas adjacent to the dredged areas, including tidal flats. The discussion regarding the navigational channels and port channels explains that while dredging is slated to occur in the same area as sampling, dredging will not adversely affect sampling in those regions. The discussion regarding "areas adjacent to the dredged areas" assumes that most sampling and dredging will not occur in the areas outside the channels but that resuspended sediments may be redeposited outside the dredged areas, making it necessary to conduct a quantitative analysis of this resuspension.⁴⁶

⁴⁵ See Amendment to the EA at 8, USACE IV: 0022117.

⁴⁶ The RIWP describes the "dominant geomorphic features of the Newark Bay" as federal navigation channels, the port channels, and broad sub-tidal flats that are located between the channels and the shorelines. RIWP at ES-5, USACE III: 0021158. The "broad shallow sub-tidal flats" are "located outside the navigation channels and cover approximately 52% of the Phase I SI Study Area." *Id.* at 3-7, USACE III: 0021198. The RIWP also notes other geomorphic features in the Bay, including transitional slopes, which are located between the channels and the subtidal flats, inter-tidal areas, industrial waterfront areas, and the Newark Bay Confined Disposal Facility. *See id.* at ES-5, USACE III: 0021158.

The EA begins by discussing the effect of dredging on surface and subsurface samples in the navigational and port channels. The EPA plans on taking three subsurface samples for each of the coring locations in the navigational and port channels.⁴⁷ In its discussion regarding this subsurface sampling, the EA assumes that the samples will be taken to “evaluate historical deposition” and concludes that dredging will not affect the EPA’s ability to “collect historical data.”⁴⁸ The EA explains its conclusion by pointing to the RIWP’s comment that “the [informational] value of vertical segments [in the navigational channels] is expected to be relatively low,” thus intimating that the EPA will not rely on those cores.⁴⁹ The EA notes that the EPA will instead rely on “data collected in the flats” for its historical analysis and avoids the simple question of whether dredging

⁴⁷ RIWP at 6-9, 6-13, USACE III: 0021254, 0021258. The EPA intends to take these samples in order to understand what sediments were “recently transported as suspended material and are currently contributing to deposition in the [NBSA].” 9/12/05 Memorandum for Record, Coordination Team Meeting, Appendix C, Amendment to the EA, USACE IV: 0022263. The EPA has proceeded with this plan even though the Corps questioned the utility of taking those samples in August 2005 and urged the EPA to relocate the sampling locations. *See* USACE Comments to EPA RI/FS Sampling Plan at 1, Appendix C, Amendment to the EA, USACE IV: 0022258.

⁴⁸ Amendment to the EA at 11, USACE IV: 0022120.

⁴⁹ *Id.* at 9, USACE IV: 0022120 (noting that the concentrations of contamination beneath the surface in the channels is likely to be low either because subsurface sediment is material from the pre-industrial age, or material of “recent origin due to the high deposition rates”).

will affect any other uses of the subsurface sampling in the navigational and port channels.⁵⁰ Notably, a certain amount of dredging will occur outside the channels, in the tidal flats, “as part of the channel widening that is anticipated in the HDP.”⁵¹ The EA’s discussion does not address whether dredging in those areas will affect EPA’s ability to collect historical data or whether it will affect the interpretation of data already collected from the tidal flats.

For surface samples being taken in the navigational and port channels, the EA focuses on samples taken before the HDP dredging and again concludes that the utility of these samples will not be affected by that dredging.⁵² The EA states that the samples will be taken in a dynamic portion of the channel which has been subject to dredging and multiple disturbances from ships and storms over the years. Thus, these samples will represent a record of “material deposited since the previous dredging event, in some combination with material left after the last dredging event.”⁵³ If the sediment is dredged again as part of the HDP, the EA notes that the samples taken before the HDP dredging will remain useful because they will “represent the contaminant data of recently settled

⁵⁰ *Id.* at 11, USACE IV: 0022120.

⁵¹ *Id.* at 22-23, USACE IV: 0022131-32.

⁵² *See id.* at 10, USACE IV: 0022119.

⁵³ *Id.*

material.”⁵⁴ The EA also finds that removal of sediment will not affect the utility of surface samples; but if it does, more samples can be taken in other areas, such as recently dredged areas.⁵⁵

The EA next assesses the effect of dredging on samples taken in areas “adjacent to the dredged areas.”⁵⁶ As the Corps noted, dredging in the channels may “indirectly affect the interpretation of the data from . . . sediment cores [taken in areas adjacent to the channels] by causing contaminated sediments from the channels to be resuspended and deposited onto the sediment surfaces in areas where such cores will be taken.”⁵⁷ In order to make this assessment, the Corps analyzed the effect of resuspension on contaminant concentrations. The Corps asserted that it studied the “(1) the amount and spatial extent of sediments that are resuspended from channels by dredging, (2) the concentrations of contaminants of those resuspended sediments and (3) the resulting effect on the chemical analyses performed on the Phase I sediment cores taken from adjacent areas.”⁵⁸ For this

⁵⁴ *Id.* at 10-11, USACE IV: 0022119-20.

⁵⁵ *See id.*

⁵⁶ *Id.* at 13, USACE IV: 0022122.

⁵⁷ Defendants’ Memorandum of Law in Opposition to Plaintiffs’ Request for Injunctive Relief (“Def. Mem.”) at 6-7.

⁵⁸ *Id.* (citing Draft Amendment at 11, USACE II: 0021013). This portion of the Draft Amendment remained unchanged in the Final Amendment.

discussion, the EA relies on: (1) two resuspension studies it conducted in 2001 and 2005;⁵⁹ (2) sediment data from several studies of contaminant concentrations in resuspended material in the Bay;⁶⁰ and (3) the analysis of 104 cores which were collected during recent dredging in the NBSA and assessed for the presence of 2,3,7,8-tetrachlorodibenzo-p-dioxin (“TCDD”).⁶¹

The EA focuses on whether dredging and resuspension would increase the concentration of contaminants in the surface sediments. The EA compares the concentration of contaminants measured beneath the surface with that of contaminants on the surface.⁶² It uses average concentrations from each dredging contract area to make this comparison.⁶³ The EA relies on cores that were collected “from depths required to fully capture the silt material that will be

⁵⁹ See Amendment to the EA at 14-15, USACE IV: 0022123-26.

⁶⁰ See *id.* at 20, USACE IV: 0022129 (noting that sediment data from eleven individual studies compiled by the National Oceanic and Atmospheric Administration in its “Newark Bay Database,” EPA’s Regional Environmental Monitoring and Assessment Program, and the Contaminant Assessment and Reduction Program were included in the data under review).

⁶¹ See *id.* at 20, Table 3, USACE IV: 0022129, 63. TCDD was chosen as a representative of dioxins and furans. See *id.* at 21.

⁶² See *id.* at 20, USACE IV: 0022129.

⁶³ See *id.* at 23, USACE IV: 0022132.

removed from dredging.”⁶⁴

After calculating these averages, the EA assesses the potential increase in surface level contamination from dredging. For Newark Bay and Kill van Kull the Corps found that “average concentration of contaminants measured . . . were similar to or less than concentrations in the surface sediments, indicating that resuspended dredged material will not likely increase surface sediment contaminant concentrations.”⁶⁵ For Arthur Kill, average concentrations of TCDD “were similar to concentrations in the surface sediments,” however, “[a]verage concentrations of the other compounds in Arthur Kill composite cores were greater than the overall averages for surface sediments.”⁶⁶

Because of the greater contaminant levels in the Arthur Kill cores, the EA analyses the effects of dredging on depositions in the Arthur Kill flats. The analysis concludes that any increase in surface level contamination would be negligible and would not affect the sampling. For example, it notes that “the

⁶⁴ *Id.* The EA notes that the “deepest core segments available in the historical record lie approximately 2.0 meters below the sediment surface.” *Id.* at 22, USACE IV: 0022131. Silt on the flats can be considerably deeper than in the channels but the EA concludes that the deeper material “is not likely to be highly contaminated” and the analysis does not examine the deeper material. *Id.* at 23, USACE IV: 0022132.

⁶⁵ *Id.* at 23, USACE IV: 0022132.

⁶⁶ *Id.*

contaminant concentrations in 6 in. surface sediment core segments would be increased by no more than 5% for all chemicals due to the dredging of Arthur Kill sediments.”⁶⁷

Of special note here is the EA’s reliance on averaging. The EA states that “it is possible that local variation in contaminant concentrations and in the dynamics of resuspension and circulation may cause local variation in effects of the dredging on surface sediments.”⁶⁸ To assess whether that calls into question its use of averaging, the Corps looked at a limited number of core samples for the presence of TCDD. It compared the concentration of TCDD in the cores with an elevated concentration to other cores in the vicinity. The Corps found that the cores in the near vicinity to the cores with an elevated concentration did not exhibit high levels of contaminants.⁶⁹ Thus, it appeared that elevated concentrations were of “limited spatial extent,” that the surface concentration of TCDD would be “unlikely to change” due to resuspension, and that the use of

⁶⁷ See *id.* at 29, USACE IV: 0022138. Cf. *id.* at 29-30, USACE IV: 0022138-39 (after conducting a sensitivity analysis, noting that redeposition of dichloro-diphenyl-trichloroethane (“DDT”) “has the potential to increase surface sediment concentrations in adjacent areas by up to 15%” and relying on the “considerable spatial variability in existing surface sediment concentrations” to conclude that a rate of redeposition of that magnitude “is unlikely to affect the RI/FS significantly”).

⁶⁸ *Id.* at 23, USACE IV: 0022132.

⁶⁹ See *id.* at 24, USACE IV: 0022133.

averaging was appropriate.⁷⁰ The EA concludes that (1) the effects of resuspension from dredging in areas where there may be an elevated concentration of contaminants will be limited, and (2) that this analysis is “relevant to the rest of the EA.”⁷¹ However, the Corps notes that “as additional data becomes available this issue will be reevaluated.”⁷²

In conclusion, the EA finds that for Goal 1 of the RIWP (1) the deepening project will have no significant effects when it is conducted *after* sampling of cores in the channels or in the areas adjacent to the channels, (2) dredging during sampling in both these locations will have no significant effect on the samples and any impacts will be mitigated by the coordination plan, (3) dredging in the channels prior to sampling will have no significant impact on the sampling, but the coordination plan and efforts to identify alternative sampling locations where needed will mitigate any effects, and (4) dredging prior to sampling in the areas adjacent to the channels will have no significant effect.⁷³ The EA also concludes that no combination of dredging before or after sampling in channels or in the areas adjacent to the channels will have significant effects on

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.* (referring to the identification of hot spots).

⁷³ See *id.* at 43, USACE IV: 0022152.

Goals 2 and 3 of the RIWP.

2. Cumulative Impact

The EA concludes that the cumulative effects of operation and maintenance dredging will likely be insignificant, but that coordination between the Corps and the EPA is planned “to ensure that each agency’s program goals are not adversely affected.”⁷⁴ In reaching this conclusion, the EA notes that currently only three sampling locations are “within areas potentially planned for federal maintenance dredging,” and, because the dredging will not occur until May 2006, it will not affect those samples.⁷⁵ The EA also notes that in the future “sampling and testing will be performed prior to every episode of federal maintenance dredging.”⁷⁶ The Corps will use these tests “to determine whether the sediments will adversely affect the RI/FS” and share the information with the EPA.⁷⁷

3. Alternatives

The EA contains two discussions of alternatives to the HDP. *First*, in a section called “environmental effects and consequences” the EA summarily notes that the Corps considered the consequences of the “no action alternative” in

⁷⁴ *Id.* at 40, USACE IV: 0022149.

⁷⁵ *Id.* at 39, USACE IV: 0022148.

⁷⁶ *Id.*

⁷⁷ *Id.* at 40, USACE IV: 0022149.

its 1999 FEIS.⁷⁸ The EA notes that the consequences of this alternative – namely maintaining the status quo – were “primarily related to cost” and that the “no action impacts were determined to be potentially more damaging to the environment as resuspension of potentially contaminated sediments due to man-made causes . . . and natural storm events would occur at more intense and greater frequencies as compared to constructing the Recommended Plan.”⁷⁹

Second, the EA focuses on certain dredging best management practices, which were proposed by the public and plaintiffs as methods for reducing the amount of resuspension of sediment and contaminants during dredging.⁸⁰ The analysis of best management practices began as a discussion of ways to “minimize the potential for adverse environmental impacts from dredging.”⁸¹ In the Draft EA, best management practices were contained in an appendix and noted in an “errata sheet” attached to the Draft Amendment.⁸² In the

⁷⁸ EA at 12, USACE IV: 0022016.

⁷⁹ *Id.*

⁸⁰ See 8/15/05 Letter from Lawrence Levine, plaintiffs’ counsel, to Ronald Pinzon, Environmental Coordinator, Army Corps of Engineers, N.Y. District, at 16, USACE I: 0020310.

⁸¹ 1999 FEIS, AR 11: 002864.

⁸² See Errata Sheet, Draft EA, USACE II: 0020993; 1/20/05 Memorandum for Record, Approaches on Minimizing Resuspension of Sediment in Dredging, Appendix B, Draft EA, USACE I: 0020129.

Final EA, the best management practices section was enlarged to include more options and relabeled as “best management practices - alternative analysis.” The commentary formerly found in the errata sheet was moved to an appendix to the EA.

The analysis begins with certain protocols which had been already addressed: the use of an environmental bucket (a lightweight bucket, without teeth, that has a variety of flaps to keep the sediment from flowing back into the water during hoisting), an environmental bucket in Historic Area Remediation Site (“HARS”)-suitable clay,⁸³ silt fences and turbidity curtains, cofferdams, air barriers, and blasting standards.⁸⁴ The appendix to the Final EA also includes several new dredging protocols: positioning software and sensors, rinse tanks, bucket speed restrictions, restrictions on hydraulic dredges, turbidity monitoring and performance standards, barge overflow standards, and adaptive management.

In addition, the EA notes that the Corps has already implemented

⁸³ HARS designation provides that the site be managed to reduce impacts at the site to “acceptable levels.” 40 C.F.R. § 228.11(c) (2006) (“When the EPA management authority determines that activities at a disposal site have placed the site in Impact Category I, the Administrator or the Regional Administrator, as the case may be, shall place such limitations on the use of the site as are necessary to reduce the impacts to acceptable levels.”).

⁸⁴ See Memorandum for Record: Approaches to Minimizing Resuspension of Sediment in Dredging through the use of Best Management Practices, Addendum to Appendix B, EA, USACE IV: 0022057-69.

several of the suggested best management practices, such as the use of environmental buckets.⁸⁵ The Corps rejected certain practices, such as positioning software, but noted that some of them may merit further investigation.⁸⁶ The Corps concluded that the other alternative protocols suggested were “inappropriate for navigational dredging, or would unnecessarily increase the cost and time to complete the HDP with only a modest if any decrease in the already significant impacts on the RI/FS study goals.”⁸⁷ The Corps also promised, through the use of adaptive management, to modify its dredging contracts should monitoring and testing demonstrate that different methods need to be adopted.⁸⁸

4. Mitigation

a. Coordination

The EA provides for a “coordination plan” to “ensure that impacts on

⁸⁵ Currently, the Corps has implemented the following best practices: prohibiting use of hopper and cutterhead dredges, environmental windows to seasonally restrict dredging to reduce the impact on wildlife, use of an environmental bucket designed to reduce sediment and minimize resuspension, use of a signal light in the control station to verify environmental bucket closure and seal, bucket penetration and depth sensors, standards regarding placement of dredged material onto the barge to prevent spillage, bucket hoist speed limitation, and a restriction on barge overflow for non-HARS material. *See Table 3, Comparison of Best Management Practices, EA, USACE IV: 0022020.*

⁸⁶ *See EA at 14, USACE IV: 0022018.*

⁸⁷ Addendum to Appendix B, EA, USACE IV: 0022057.

⁸⁸ *See EA at 15, USACE IV: 0022019.*

the EPA’s remedial investigation and feasibility study, and possible future environmental remediation, of the [NBSA] from dredging activities are identified, avoided, and minimized to the fullest extent possible.”⁸⁹ The two-page plan establishes a coordination team made up of the Corps, the EPA, the United States Coast Guard, the Natural Resources Damages Trustees (the United States Fish and Wildlife Service, National Marine Fisheries, the New Jersey Department of Environmental Protection, the New York State Department of Environmental Conservation), and the Port Authority of New York and New Jersey.⁹⁰ In an appendix, the EA identifies the names and titles of specific individual representatives who will participate in the coordination plan on behalf of each agency.⁹¹

The plan is co-chaired by representatives of the Corps and of the EPA, Region 2. Goals are set and a monthly meeting is scheduled to be held at the offices of the Corps and the EPA on an alternating basis. Meetings may be cancelled by the co-chairpersons “if there is no need to share information.”⁹² The

⁸⁹ 12/21/05 NBSA Coordination Plan (“Coordination Plan”), Appendix C, Amendment to the EA, USACE IV: 0022283.

⁹⁰ *See id.*, USACE IV: 0022284.

⁹¹ *See id.*, USACE IV: 0022286.

⁹² *Id.*, USACE IV: 0022285.

plan establishes that during the meetings the team will (1) update each other on current and future activities in the NBSA, (2) share information on respective projects in the Area, and (3) “resolve outstanding issues.”⁹³ The EA notes that as of the date it was issued, several sampling locations had already been moved in order to avoid any interference from dredging operations.⁹⁴

Notably, the RIWP relies on promises of coordination. For example, the RIWP explains that during the sampling Tierra will meet with the Corps to “decide if select core locations need to change due to on-going dredging activities” in the navigational and port channels.⁹⁵ However, Tierra is not included in the EA’s Coordination Plan team.⁹⁶ Instead, a Tierra representative attends the coordination meetings on a sporadic basis and an EPA representative typically provides the sampling update.⁹⁷

Since the publication of the Draft Amendment, the Corps also added a

⁹³ *Id.*

⁹⁴ See Amendment to the EA at 42, USACE IV: 0022151.

⁹⁵ RIWP at 6-9, USACE III: 0022154.

⁹⁶ See Coordination Plan, USACE IV: 0022286.

⁹⁷ See, e.g., 10/24/05 Memorandum for Record, NBSA Coordination Team Meeting, USACE-EPA Coordination Plan and Related Correspondence, Appendix C, Amendment to the EA, USACE IV: 0022276.

“dispute resolution” section to the coordination plan. This section was adopted after plaintiffs’ original brief in this litigation noted the lack of any kind of dispute resolution mechanism.⁹⁸ The current plan provides for a tiered dispute resolution mechanism. Team members are first directed to resolve the dispute.⁹⁹ If they cannot resolve the dispute within seven days, “the issue will be raised to the agency supervisors of the team members” with the dispute.¹⁰⁰ If unresolved, again within seven days, the dispute is referred to the New York and New Jersey Harbor Senior Partners (senior representatives of each agency).¹⁰¹

The Corps relies on coordination to mitigate any impact that the HDP could have on some aspects of the RI/FS. *First*, as noted, it relies on coordination to mitigate any impacts of maintenance dredging on the sampling.¹⁰² *Second*, the EA notes that “it is difficult to evaluate what effect [the HDP] dredging may have upon future [natural resource] damage assessment activities” because those

⁹⁸ See Pl. Mem. at 18 (noting that the plan lacked details “on a coordination process, including a mechanism for resolving inter-agency conflicts and agreement on data quality objectives for environmental monitoring”).

⁹⁹ See Coordination Plan ¶ 4, USACE 0022285.

¹⁰⁰ *Id.*

¹⁰¹ See *id.*

¹⁰² See Amendment to the EA at 39, USACE IV: 0022149.

determinations have not yet been made.¹⁰³ However the EA provides for “coordination with the natural resource trustees” so that the effects of dredging on the process will be “minimized to the fullest extent practicable.”¹⁰⁴ There is no provision for assessing or reviewing the effectiveness of this coordination.

b. Monitoring

The Corps does intend, however, to rely on a monitoring program to “evaluate the extent of resuspension of sediments caused by dredging” throughout the life of the HDP.¹⁰⁵ The resuspension monitoring will be implemented in several ways. *First*, a Corps Construction Field Office Inspector will monitor the dredging activities to ensure “quality assurance” and will require an “inspector’s form,” which contains the:

(1) date and time of inspection, (2) type of bucket, (3) flaps on environmental bucket intact and operable, (4) hoist speed, (5) no barge overflow (if appropriate), (6) placement of dredge material in barge, and (7) corrective action taken (if necessary).¹⁰⁶

A member of the Corps’ Planning Division will also conduct unannounced

¹⁰³ *Id.* at 37, USACE IV: 0022146.

¹⁰⁴ *Id.*

¹⁰⁵ Def. Mem. at 16 (citing NY & NJ Harbor Deepening Project – Total Suspended Sediment (TSS) Sampling: Scope of Work, USACE I: 0020001).

¹⁰⁶ EA at 19, USACE IV: 0022023.

inspections with the same inspector's form, on the dredge, from an alternate vessel, and from the shoreline.¹⁰⁷ Pursuant to water quality certification requirements, which is governed by the state of New Jersey,¹⁰⁸ the Corps is also required to submit a “dewatering form” to the state environmental agency on a weekly basis, regarding pumping and discharging of sediment.¹⁰⁹

In addition, the Corps will perform a Total Suspended Solids (“TSS”) Monitoring Program, to sample suspended sediments due to dredging activities.¹¹⁰ The Corps notes that the Monitoring Program has been modified in response to plaintiffs’ comments to “employ [an optical backscatter sensor] in such a manner as to measure turbidity at multiple locations and capture temporal variation in

¹⁰⁷ See *id.*

¹⁰⁸ Section 401 of the Clean Water Act requires a federal agency to apply for a license from a state if it intends to engage in any “construction or operation” that will result in a discharge of pollutants into the navigable waters of that state. 33 U.S.C. § 1341(a)(1) (2006).

¹⁰⁹ See EA at 19, USACE IV: 0022023.

¹¹⁰ The TSS Monitoring Program has the following objectives:

- Define relationships between gravimetric, optical, and acoustic measures of turbidity and TSS in the selected channel reaches,
- Determine ambient turbidity and TSS conditions in the study areas during selected periods,
- Determine the spatial structure and temporal dynamics of plumes associated with specific dredging operations in the study areas. *Id.* at 20, USACE IV: 0022024.

plume structure, to conduct multiple surveys of the plume via [an acoustic Doppler current profiler,] and to use a sufficient water sample size to determine the relationship between turbidity and TSS measures.”¹¹¹ Through these mechanisms, the Corps will constantly monitor the resuspension of sediments caused by dredging and dredge plumes.¹¹²

The Corps will rely on monitoring to coordinate certain phases of dredging with sampling. For example, water samples will likely be taken as part of the RI/FS.¹¹³ The EA notes that monitoring data from the dredging will provide guidance on when to conduct the water sampling.¹¹⁴ The Corps expects monitoring data to be helpful to both the Corps and the EPA’s RI/FS.¹¹⁵

III. APPLICABLE LAW

A. Ripeness

¹¹¹ Defendants’ Supplemental Memorandum of Law in Opposition to Plaintiffs’ Request for Injunctive Relief (“Def. Supp. Mem.”) at 5.

¹¹² *See* Response to Comment: Natural Resources Defense Council (“NRDC”) Letter to the Corps dated August 15, 2005 at 5, Appendix D, Amendment to the EA, USACE IV: 0022363.

¹¹³ *See* Amendment to the EA at 32, USACE IV: 0022141.

¹¹⁴ *See id.*

¹¹⁵ *See* Response to Comment: NRDC Letter to the Corps dated August 15, 2005 at 5, Appendix D, Amendment to the EA, USACE IV: 0022363.

The ripeness requirement is designed “to prevent the courts, through avoidance of premature adjudication, from entangling themselves in abstract disagreements over administrative policies.”¹¹⁶ It also protects “the agencies from judicial interference until an administrative decision has been formalized and its effects felt in a concrete way by the challenging parties.”¹¹⁷ A court must evaluate “the fitness of the issues for judicial decision and the hardship to the parties of withholding court consideration.”¹¹⁸

The Supreme Court has noted that because NEPA is designed to guarantee a particular procedure rather than a particular result, “a person with standing who is injured by a failure to comply with the NEPA procedure may complain of that failure at the time the failure takes place, for the claim can never get riper.”¹¹⁹ For example,

one living adjacent to the site for proposed construction of a federally licensed dam has standing to challenge the licensing agency’s failure to prepare an [EIS] even though he cannot establish with any certainty that the statement will cause the license to be withheld or altered, and even though the dam will

¹¹⁶ *Abbott Labs. v. Gardner*, 387 U.S. 136, 148-49 (1967).

¹¹⁷ *Id.*

¹¹⁸ *Id.* at 149.

¹¹⁹ *Ohio Forestry Ass ’n v. Sierra Club*, 523 U.S. 726, 737 (1998).

not be completed for many years.¹²⁰

Thus, where the allegation is that an agency's final NEPA documentation fails to comply with NEPA procedure, there is no doubt the agency's determination is ripe for judicial review.¹²¹

B. Mootness

The jurisdiction of a federal court is limited to cases and controversies.¹²² Thus, a federal court lacks authority "to give opinions upon moot questions or abstract propositions, or to declare principles or rules of law which cannot affect the matter in issue in the case before it."¹²³ "A case or controversy becomes moot either when the injury is healed and only prospective relief has been sought, or when it becomes impossible for the courts to redress the injury

¹²⁰ *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 573 (1992).

¹²¹ See *Greene County Planning Bd. v. Federal Power Comm'n.*, 490 F.2d 256, 258 (2d Cir. 1973) (rejecting as not ripe a challenge to an EIS that had not been finalized by agency order). See also 40 C.F.R. § 1500.3 (2006) ("[J]udicial review of agency compliance with these regulations [should] not occur before an agency has filed the final EIS, or has made a final [FONSI] (when such a finding will result in action affecting the environment), or takes action that will result in irreparable injury.").

¹²² See U.S. Const. art III, § 2; *Fund for Animals v. Babbitt*, 89 F.3d 128, 132 (2d Cir. 1996).

¹²³ *Church of Scientology of Cal. v. United States*, 506 U.S. 9, 12 (1992).

through the exercise of their remedial powers.”¹²⁴

“[I]t is not appropriate to order injunctive relief regarding a project if the agency corrects violations of NEPA or agency regulations prior to implementation of the project.”¹²⁵ Where evidence outside the agency’s record demonstrates that the NEPA violations were corrected, and an injunction would serve no remedial purpose, a court should not issue an injunction.¹²⁶

C. NEPA Requirements

1. EIS

The procedural requirements of NEPA are intended to ensure that the “broad national commitment to protecting and promoting environmental quality . . . is ‘infused into the ongoing programs and actions of the Federal

¹²⁴ *Fund for Animals*, 89 F.3d at 133.

¹²⁵ *Oregon Natural Res. Council v. Devlin*, 776 F. Supp. 1440, 1450 (D. Or. 1991) (citations omitted). *Accord National Forest Pres. Group v. Butz*, 485 F.2d 408, 412 (9th Cir. 1973) (where there has been no prejudicial failure to comply with NEPA, requiring the agency to perform a sterile exercise would serve no useful purpose).

¹²⁶ *See National Audubon Soc'y*, 132 F.3d at 15 (noting that review of extra-record evidence, evidence that is outside the administrative record compiled by an agency, may be appropriate in order to determine if the agency “adequately considered the environmental effects of the particular project”); *Friends of the Clearwater*, 222 F.3d at 558.

Government.”¹²⁷ “NEPA ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast.”¹²⁸ Thus, NEPA requires federal agencies to prepare a detailed EIS for “major Federal actions significantly affecting the quality of the human environment . . . on . . . (i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action.”¹²⁹

2. SEIS

An agency’s obligations under NEPA do not end with the preparation of an EIS. The agency may be required to prepare an SEIS “if there ‘are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.’”¹³⁰ An agency’s determination whether to prepare an SEIS in light of new information or circumstances is

¹²⁷ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989) (quoting 115 Cong. Rec. 40416 (Dec. 20, 1969) (remarks of Sen. Henry M. Jackson)).

¹²⁸ *Id.* at 349.

¹²⁹ 42 U.S.C. § 4332(2)(C)(i-iii) (2006).

¹³⁰ *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 372 (1989) (quoting 40 C.F.R. § 1502.9(c)).

governed by a “rule of reason.”¹³¹ “[A]n agency need not supplement an EIS every time new information comes to light after the EIS is finalized. To require otherwise would render agency decisionmaking intractable.”¹³² However, an agency must prepare an SEIS whenever major federal action is yet to occur which the new information shows will affect the quality of the human environment in a significant manner or to a significant extent not already considered.¹³³ As with the decision to prepare an EIS, “[c]lose calls should be resolved in favor of preparing a SEIS.”¹³⁴ If the agency determines that the new information is not sufficiently significant to require an SEIS, the agency is not necessarily required to produce a formal NEPA document explaining its decision.¹³⁵ “The fact that effects are only a possibility does not insulate the proposed action from consideration under NEPA, but it does accord an agency some latitude in

¹³¹ *Id.* at 373.

¹³² *Id.*

¹³³ *See id.* at 374.

¹³⁴ *Senville v. Peters*, 327 F. Supp. 2d 335, 356 (D. Vt. 2004) (citing *National Audubon Soc'y*, 132 F.3d at 13).

¹³⁵ *See Friends of River v. Federal Energy Regulatory Comm'n*, 720 F.2d 93, 109 (D.C. Cir. 1983) (quotations omitted).

determining whether the risk is sufficient to require preparation of an EIS.”¹³⁶

3. Environmental Assessment

At times, the need to require or not require an EIS is clear. An agency’s regulations may require an EIS, or a particular action may be categorically excluded from that requirement.¹³⁷ If the requirement for an EIS is not clear, however, the Council of Environmental Quality (“CEQ”) regulations allow an agency to prepare an EA in order to determine whether there will be a significant impact from the project.¹³⁸ If the agency concludes in the EA that there will be no significant effects from the proposed project, it may issue a FONSI in lieu of an EIS or SEIS.¹³⁹

The EA is to be a “concise public document” that provides sufficient evidence and analysis for determining whether to prepare an EIS and a comprehensive assessment of the impacts of the project.¹⁴⁰ An EA must have “brief discussions of the need for the proposal, of alternatives . . . of the

¹³⁶ *Orangetown v. Gorsuch*, 718 F.2d 29, 38 (2d Cir. 1983).

¹³⁷ See 40 C.F.R. § 1507.3 (2006).

¹³⁸ See *id.* § 1501.4(a)-(b) (2006).

¹³⁹ See *id.* § 1508.9(a)(1) (2006).

¹⁴⁰ *Id.* § 1508.9.

environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.”¹⁴¹ “[T]he conclusions in the EA must be supported by ‘some quantified or detailed information,’ and the underlying environmental data relied upon to support the expert conclusions must be made available to the public” to allow for informed public comment on the project.¹⁴² The EA should be prepared at the “earliest possible time to insure that planning and decisions reflect environmental values.”¹⁴³

4. Cumulative Impact

The CEQ’s regulations also require that agencies consider the “cumulative impact” of a proposed project.¹⁴⁴ Cumulative impact denotes “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such

¹⁴¹ *Id.*

¹⁴² *Sierra Nev. Forest Prot. Campaign v. Weingardt*, 376 F. Supp. 2d 984, 991 (E.D. Cal. 2005) (quoting *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 996 (9th Cir. 2004)).

¹⁴³ *Andrus v. Sierra Club*, 442 U.S. 347, 351 (1979) (quoting 40 C.F.R. § 1501.2).

¹⁴⁴ 40 C.F.R. § 1508.7.

other actions.”¹⁴⁵

5. Alternatives

Federal agencies must “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.”¹⁴⁶ The purpose of this requirement is to provide evidence that the agency considered different methods for obtaining its goal and to give the agency the ability to balance and weigh factors related to the different alternatives before making its choice to proceed with the project.¹⁴⁷ The consideration of alternatives “is the heart of the [EIS].”¹⁴⁸ An agency issuing an EIS must “[r]igorously explore and objectively evaluate all reasonable alternatives,” consider a “no action” in which it is assumed that the project will not go forward, “[i]nclude reasonable alternatives not within the jurisdiction of the lead agency,” and “[i]dentify the agency’s

¹⁴⁵ *Id.*

¹⁴⁶ 42 U.S.C. § 4332(E).

¹⁴⁷ See *Sierra Club v. Morton*, 510 F.2d 813, 819 (5th Cir. 1975).

¹⁴⁸ 40 C.F.R. § 1502.14. See, e.g., *Simmons v. United States Army Corps of Eng’rs*, 120 F.3d 664, 666-67 (7th Cir. 1997) (noting that the reasonable alternatives that must be considered are tied to a project’s purposes and that “[n]o decision is more important than delimiting what these ‘reasonable alternatives’ are”).

preferred alternative.”¹⁴⁹

Where an agency has made a valid FONSI, the range of alternatives it must assess is necessarily more limited than for an EIS,¹⁵⁰ however the requirement remains important.¹⁵¹ Thus, when the agency has opted to begin the process with an EA, the document must include “brief discussions of the need for the proposal, of alternatives [to the proposed action], of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.”¹⁵² An agency “need not consider an infinite range of alternatives, only

¹⁴⁹ 40 C.F.R. § 1502.14.

¹⁵⁰ *See New York v. United States Dep’t of Transp.*, 715 F.2d 732, 744 (2d Cir. 1983) (“an agency’s [FONSI], if otherwise valid, permits the agency to consider a narrower range of alternatives than it might be obliged to assess before undertaking action that would significantly affect the environment”).

¹⁵¹ *See Native Ecosystems Council v. United States Forest Serv.*, 428 F.3d 1233, 1245 (9th Cir. 2005) (“The alternatives provision of NEPA applies whether an agency is preparing an EIS or an EA”); *Citizens Advisory Comm. on Private Prisons, Inc. v. United States Dept. of Justice*, 197 F. Supp. 2d 226, 244 (W.D. Pa. 2001) (“What is most troubling about the [agency’s] discussion of alternatives in its Draft EA is that there is no discussion at all.”).

¹⁵² 40 C.F.R. § 1508.9(b). *See, e.g., Senville*, 327 F. Supp. 2d at 347 (noting that a twenty-three page alternatives analysis covering five different alternatives to a highway construction project was sufficient to permit a reasoned choice).

reasonable or feasible ones.”¹⁵³ The discussion “need not be exhaustive,” but it should be “sufficient to permit a reasoned choice of alternatives as far as environmental aspects are concerned.”¹⁵⁴

6. Mitigation

One important element of NEPA is its requirement that an agency discuss methods for mitigating adverse environmental consequences.¹⁵⁵ An agency’s NEPA documentation must “[i]nclude appropriate mitigation measures not already included in the proposed action or alternatives.”¹⁵⁶ “When the adequacy of proposed mitigation measures is supported by substantial evidence, the agency may use those measures as a mechanism to reduce environmental impacts below the level of significance that would require an EIS.”¹⁵⁷ However,

¹⁵³ *Senville*, 327 F. Supp. 2d at 347 (citing *City of Carmel-by-the-Sea v. United States Dep’t of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997)).

¹⁵⁴ *Id.*

¹⁵⁵ See *Robertson*, 490 U.S. at 351-52.

¹⁵⁶ 40 C.F.R. § 1502.14(f).

¹⁵⁷ *National Audubon Soc’y*, 132 F.3d at 13. *Accord Pogliani v. United States Army Corps of Eng’rs*, 166 F. Supp. 2d 673, 697 (N.D.N.Y. 2001) (noting that an agency’s reliance on mitigation measures which were “demonstrated via documentary and testimonial evidence [to] undisputedly eliminate and/or significantly reduce many, if not all, of the environmental and aesthetic concerns raised by state agencies and the public regarding the project” was reasonable).

“agencies should define ‘significance’ broadly and not rely on proposed mitigation measures as an excuse to avoid preparing an EIS.”¹⁵⁸

“[M]itigation measures have been found to be sufficiently supported when based on studies conducted by the agency . . . or when they are likely to be adequately policed.”¹⁵⁹ For example, where a “proposal [was] modified prior to implementation by adding specific mitigation measures which completely compensate[d] for any possible adverse environmental impacts stemming from the original proposal, the statutory threshold of significant environmental effects [was] not crossed and an EIS [was] not required.”¹⁶⁰ A proposed mitigation measure should be accompanied by some level of assurance as to its efficacy. An agency must study the likely effects of the measure, propose monitoring to determine how effective the planned mitigation would be, and consider alternatives in the event the measure failed. Otherwise, an agency may not rely on that mitigation measure to reduce environmental or cumulative impact below the

¹⁵⁸ *National Audubon Soc'y*, 132 F.3d at 17.

¹⁵⁹ *Id.* at 13. *Accord Friends of Ompompanoosuc v. Federal Energy Regulatory Comm'n*, 968 F.2d 1549, 1557 (2d Cir. 1992).

¹⁶⁰ *Abenaki Nation of Mississquoi v. Hughes*, 805 F. Supp. 234, 245 (D. Vt. 1992), *aff'd*, 990 F.2d 729 (2d Cir. 1993).

level of significance that would require an EIS or an SEIS.¹⁶¹

7. Standard of Review

The Administrative Procedure Act (“APA”) governs judicial review of an agency’s compliance with NEPA.¹⁶² The APA provides that a reviewing court shall “hold unlawful and set aside agency action, findings, and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law, . . . [or] without observance of procedure required by law.”¹⁶³ An agency’s decision is accorded a “presumption of regularity,” and the party challenging the decision has the burden of proof.¹⁶⁴

Review of an agency’s decision not to supplement an EIS is controlled by the ‘arbitrary and capricious’ standard of section 706(2)(A) of the

¹⁶¹ See *National Audubon Soc'y*, 132 F.3d at 17 (in review of a planned logging road and the problem of unauthorized use of all-terrain vehicles (“ATV”) the agency’s promise that “additional measures may be used to control illegal ATV use” was not a sufficient guaranty of mitigation where there was “no indication that the agency reviewed [the] measures at the time of its decision, or that it afforded the public an opportunity to comment on them.”).

¹⁶² See *Sierra Club v. United States Army Corps of Eng'rs*, 772 F.2d 1043, 1050 (2d Cir. 1985) (“*Sierra Club II*”).

¹⁶³ 5 U.S.C. §§ 706(2)(A), (D).

¹⁶⁴ *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415 (1971). *Accord Vermont Pub. Interest Research Group v. United States Fish & Wildlife Serv.*, 247 F. Supp. 2d 495, 505 (D. Vt. 2002).

APA.¹⁶⁵ A reviewing court must make a “searching and careful” inquiry into “whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.”¹⁶⁶ In the Second Circuit, this review has two steps. *First*, the court considers “whether the agency took a ‘hard look’ at the possible effects of the proposed action.”¹⁶⁷ *Second*, if the court is satisfied that the agency took a hard look, the court must then determine “whether the agency’s decision was arbitrary or capricious.”¹⁶⁸ An agency’s decision whether to issue an EA or an SEIS, its consideration of cumulative impact and alternatives for the proposed project, and its proposal for mitigation measures are all subject to this inquiry.

D. Curing a NEPA Violation

After a NEPA violation has been found, a court must assess any new environmental review undertaken by that agency before deciding on an appropriate remedy. While agencies are regularly given the opportunity to remedy

¹⁶⁵ See *Marsh*, 490 U.S. at 376.

¹⁶⁶ *Id.* at 378 (citing *Citizens to Preserve Overton Park, Inc.*, 401 U.S. at 416).

¹⁶⁷ *Village of Grand View v. Skinner*, 947 F.2d 651, 657 (2d Cir. 1991).

¹⁶⁸ *Id.*

a NEPA violation,¹⁶⁹ there are very few decisions from courts reviewing these remedial efforts.¹⁷⁰ Those courts that have evaluated remedial efforts have not conducted a de novo review.¹⁷¹ In fact, a review of the case law demonstrates that courts rarely deviate from the well-established standard of arbitrary and capricious review following a remand to the agency. For example, in this circuit, a non-NEPA agency decision that was challenged pursuant to the APA after a remand was reviewed under the arbitrary and capricious standard.¹⁷² Outside this circuit, the two-step hard look and arbitrary and capricious standard was applied to an

¹⁶⁹ See *Natural Res. Defense Council v. Callaway*, 524 F.2d 79, 95 (2d Cir. 1975) (enjoining the Navy from proceeding on a project until “the serious deficiencies in the EIS” could be remedied).

¹⁷⁰ See, e.g., *Citizens Advisory Comm. on Private Prisons*, 197 F. Supp. 2d at 249-50 (reviewing case law on curing NEPA violations).

¹⁷¹ See *Camp v. Pitts*, 411 U.S. 138, 142 (1973) (“[D]e novo review is appropriate only where there are inadequate factfinding procedures in an adjudicatory proceeding, or where judicial proceedings are brought to enforce certain administrative actions.”). See also *National Audubon Soc’y*, 132 F.3d at 15 (“[w]hile we allow the consideration of extra-record evidence, review of an agency’s action is not de novo”).

¹⁷² See *National Nutritional Foods Ass’n v. Mathews*, 557 F.2d 325, 337 (2d Cir. 1977) (reviewing an agency’s explanations for a rulemaking made on remand, to determine whether the agency acted rationally and finding that its decision was arbitrary and capricious).

agency's attempts to cure NEPA violations.¹⁷³

However, in applying that two-step standard at this stage, a court must pay particular attention to two additional issues. *First*, a court must make a “searching and careful” inquiry into whether the agency’s explanations were made objectively and in good faith.¹⁷⁴ The Supreme Court warned almost thirty years ago that courts should “critically review” agency explanations that come after a decision to proceed has been made because of the risk of “post-hoc rationalization.”¹⁷⁵ Similarly, courts in other circuits have noted that it is appropriate to “critically review” an agency’s NEPA documentation in order to

¹⁷³ See, e.g., *Friends of the Clearwater*, 222 F.3d at 561 (reviewing supplemental material submitted by the Forest Service and determining that the agency had “taken a ‘hard look’” at certain new circumstances and “that its determination that an SEIS is not required [was] not arbitrary and capricious”); *Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1024 (9th Cir. 1980) (in case that was remanded to district court with instructions to reconsider “seismic safety and water quality” issues in the environmental review of a dam project, the court assessed an SEIS that was prepared on those subjects prior to the remand hearing, under an arbitrary and capricious standard).

¹⁷⁴ *Marsh*, 490 U.S. at 378. *Accord Callaway*, 524 F.2d at 95 (finding the Navy in violation of NEPA and directing it to circulate a supplemental EIS that made “a genuine effort in a truly objective fashion to evaluate” the environmental issues posed by the project).

¹⁷⁵ *Citizens to Preserve Overton Park, Inc.*, 401 U.S. at 420 (noting that an explanation for an action prepared after the decision to proceed “will, to some extent, be a ‘post hoc rationalization’ and thus must be viewed critically”).

guard against post-hoc rationalizations.¹⁷⁶ CEQ regulations prohibit an agency from preparing an EIS simply to justify decisions already made.¹⁷⁷ Under these circumstances, an agency must show, at a minimum, that it made a good faith and objective review of the potential environmental impacts of its proposed action.¹⁷⁸ Conversely, if the agency has postponed its project and objectively and in good faith reassessed the potential environmental impacts of its project, it is likely that

¹⁷⁶ See, e.g., *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000) (carefully scrutinizing an agency’s attempt to cure a NEPA violation and noting that because the agency entered into a firm commitment to conduct a whaling project before preparing an EA, it was highly likely that the subsequently prepared EA was “slanted in favor of finding that the . . . whaling project would not significantly affect the environment”); *City of Waltham v. United States Postal Serv.*, 11 F.3d 235, 240 (1st Cir. 1993) (Breyer, J.) (considering an EA which was produced after the agency had already made a FONSI, without giving the agency the “benefit of any particular doubt” in order to guard against “post hoc rationalizations”); *North Slope Borough v. Andrus*, 642 F.2d 589, 603-04 & n.78 (D.C. Cir. 1980) (examining documents other than the EIS in order to clarify agency decision-making process and finding there were “no elements of information withholding, or post hoc rationalization”).

¹⁷⁷ See 40 C.F.R. § 1502.2(g).

¹⁷⁸ See, e.g., *Louisiana v. Lee*, 758 F.2d 1081, 1085 (5th Cir. 1985) (finding that EA revised in response to challenge of agency’s FONSI is post-hoc rationalization that should be reviewed critically); *Citizens Advisory Comm. on Private Prisons*, 197 F. Supp. 2d at 251 (noting that “where the agency has already violated NEPA, its vow of good faith and objectivity is often viewed with suspicion”).

the agency has *cured* its violation.¹⁷⁹

Second, in making this assessment, a court may conduct a “plenary review” in order to procure further documentation which allows it to assess the agency’s decision and the rationale supporting that decision.¹⁸⁰ To do so, a court may “obtain from the agency, either through affidavits or testimony, such additional explanation of the reasons for the agency decision as may prove necessary.”¹⁸¹

¹⁷⁹ See *Citizens Advisory Comm. on Private Prisons*, 197 F. Supp. 2d at 252 (quoting *Metcalf*, 214 F.3d at 1142) (“NEPA cannot be used as a mere ‘subterfuge designed to rationalize a decision already made.’”). See also *Upper Pecos Ass’n v. Stans*, 500 F.2d 17, 19 (10th Cir. 1974) (noting that a NEPA review conducted only during the final stages of a project “tends to serve as a post facto justification of decisions based on traditional and narrow grounds” and assessing the agency’s belated preparation of an EIS to determine whether the agency made an objective determination of possible environmental impacts).

¹⁸⁰ *Citizens to Preserve Overton Park*, 401 U.S. at 420 (directing the district court to conduct a plenary review of the full administrative record before the Secretary of Transportation at the time of his decision as well as any other evidence, including live testimony and other formal findings in order to determine whether the Secretary acted within the scope of his authority).

¹⁸¹ *Sierra Club II*, 772 F.2d at 1052 (quotations omitted) (“[P]lenary review, which is more limited than de novo review, is permitted when the agency’s record is so sparse as to make judicial review ineffectual.”). Cf. *Friends of the Earth v. United States Forest Serv.*, 95 F. Supp. 2d 206, 210-11 (D. Vt. 2000) (“Should a review of the administrative record reveal a paucity of administrative explanation or the failure to address pertinent issues, such that effective judicial review is frustrated, the proper remedy is still not a de novo review in this court. Instead, the appropriate procedure to be followed is to

In sum, a court must carefully examine each element of the NEPA documentation, including the alternatives analysis and proposed mitigation, first to determine whether the agency has satisfied the hard look standard, and, if so, whether the decision was arbitrary and capricious. A court may conduct this review by examining documents outside the agency's record and must pay careful attention to the agency's rationale.

E. Remedy

1. Injunctive Relief

“Injunctive relief . . . has been used when appropriate for violations of NEPA.”¹⁸² However, injunctive relief “does not follow automatically upon a finding of statutory violations” in the NEPA context.¹⁸³ “[A] court must [instead]

remand the matter [to the Agency] for a further explanation or, where appropriate, supplementation of the record.”) (citations and quotations omitted).

¹⁸² *Town of Huntington v. Marsh*, 859 F.2d 1134, 1143 (2d Cir. 1988) (“*Town of Huntington I*”). *Accord Sierra Club v. United States Army Corps of Eng’rs*, 732 F.2d 253 (2d Cir. 1984); *Callaway*, 524 F.2d at 95 (finding that plaintiffs had made a showing of possible irreparable damage and directing the district court to issue an appropriate temporary injunction to maintain the status quo until the defects in the agency’s EIS were remedied).

¹⁸³ *Town of Huntington v. Marsh*, 884 F.2d 648, 654 (2d Cir. 1989) (“*Town of Huntington II*”) (injunction vacated and case remanded for an evidentiary hearing on irreparable harm). *Cf. Washington County v. United States Dept. of Navy*, 317 F. Supp. 2d 626, 637 (E.D. N.C. 2004) (public interest favored granting of preliminary injunction against construction pending proper

balance the competing claims of injury and must consider the effect on each party of the granting or withholding of the requested relief.”¹⁸⁴ Thus, “[a]lthough the procedural requirements of NEPA must be followed scrupulously and cost or delay will not alone justify noncompliance with the Act . . . it remains within the sound discretion of a district court to decline an injunction, even where deviations from prescribed NEPA procedures have occurred.”¹⁸⁵

Courts apply a four-part test when deciding whether to grant an injunction. The test requires: (1) irreparable injury,¹⁸⁶ (2) inadequacy of legal remedies, (3) that the balance of effects weighs in favor of the movant, and (4) that

environmental review; public interest would not have been served by compromising environmental due process and proceeding with project that later may have been found to violate NEPA).

¹⁸⁴ *Amoco Prod. Co. v. Village of Gambell*, 480 U.S. 531, 542 (1987).

¹⁸⁵ *Conservation Soc'y of S. Vt., Inc. v. Secretary of Transp.*, 508 F.2d 927, 933-34 (2d Cir. 1974), vacated on other grounds and remanded, *Coleman v. Conservation Soc'y of S. Vt.*, 423 U.S. 809 (1975). *Accord Town of Huntington I*, 859 F.2d at 1143 (quoting *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312 (1982)) (“[A]n injunction should issue only where the intervention of a court of equity is essential in order effectually to protect property rights against injuries otherwise irremediable.”); *Knowles v. United States Coast Guard*, 924 F. Supp. 593, 603 (S.D.N.Y. 1996) (quotations omitted) (“[A] threat of irreparable injury must be proved, not assumed, and may not be postulated *eo ipso* on the basis of procedural violations of NEPA.”).

¹⁸⁶ See *Knowles*, 924 F. Supp. at 603 (plaintiffs are “required to demonstrate that if . . . [an] injunction does not issue, they will suffer the imminent irreparable harm NEPA is designed to protect against”).

the injunction is in the public interest.¹⁸⁷ “[A] threat of irreparable injury must be proved, not assumed.”¹⁸⁸ If the injury is sufficiently likely, the balance of harm will likely favor an injunction.¹⁸⁹ However, a court must determine whether irreparable harm is “actual and imminent.”¹⁹⁰ In deciding whether irreparable harm is imminent, a court must look only at the current stage of the project, and not the effects of the project as a whole, or the projected effects at a later stage of the project.¹⁹¹ Finally, injunctions issued under NEPA, like injunctions generally,

¹⁸⁷ See *Amoco Prod. Co.*, 480 U.S. at 542. See also *New York v. Nuclear Regulatory Comm'n*, 550 F.2d 745 (2d Cir. 1977); *Town of Huntington I*, 859 F.2d at 1143 (vacating and remanding a permanent injunction with instructions to the district court that it determine the appropriateness of an injunction according to traditional equitable principles).

¹⁸⁸ *Town of Huntington II*, 884 F.2d at 653 (injunctive relief is only appropriate in the NEPA context where “substantial danger to the environment, in addition to a violation of procedural requirements, is established”).

¹⁸⁹ See *Amoco Prod. Co.*, 480 U.S. at 545.

¹⁹⁰ *Nuclear Regulatory Comm'n*, 550 F.2d at 755.

¹⁹¹ See, e.g., *County of Suffolk v. Secretary of Interior*, 562 F.2d 1368, 1391 (2d Cir. 1977) (vacating an injunction and affirming an EIS in a “multistage project” to drill offshore for oil and gas deposits, finding that the project was “environmentally divisible” and that it was “subject to substantial modification by the government to satisfy environmental objections as it progressed”); *Stand Together Against Neighborhood Decay, Inc. v. Board of Estimate*, 690 F. Supp. 1192 (E.D.N.Y. 1988) (noting that it is appropriate to draw lines between stages of a project that may cause irreparable harm and stages that do not).

must serve a remedial purpose.¹⁹²

2. Remand

If a court makes an express finding that there is a “substantial possibility” a project may have a significant effect on the human environment, the court may order the preparation of an EIS.¹⁹³ A party challenging the agency’s decision not to prepare an EIS need not show that the project “clearly” will have a significant impact on the environment.¹⁹⁴ As noted, an EIS or SEIS should be prepared when the question of whether there will be a significant impact is a close

¹⁹² See *Nuclear Regulatory Comm’n*, 550 F.2d at 754 (noting that an “irreversible and irretrievable commitment of resources that would have made it certain that [a] missing EIS, even if eventually completed would never serve the purpose it was intended to serve – that of insuring that [a] federal project having a significant effect on the environment might proceed only on the basis of ‘careful and informed decision-making process’” – may be sufficient to support the issuance of a preliminary injunction). See also *Steubing v. Brinegar*, 511 F.2d 489, 493 (2d Cir. 1975) (affirming the issuance of a preliminary injunction and noting that an EIS “might well have pointed out potential environmental savings well worth the cost involved in altering the decision, location, or construction methods” for the project); *Realty Income Trust v. Eckerd*, 564 F.2d 447, 456-57 (D.C. Cir. 1977) (finding no injunction warranted because “a final EIS was prepared and released before any construction was actually begun on the site” and the “action having a significant effect on the environment did not commence [or proceed] in ignorance of possible adverse consequences”).

¹⁹³ *National Audubon Soc’y*, 132 F.3d at 18. Accord *City of Waltham*, 11 F.3d at 239.

¹⁹⁴ *National Audubon Soc’y*, 132 F.3d at 18.

one.¹⁹⁵ A court’s job is not to *answer* the question of whether the proposed action will have a significant impact on the environment, but merely to determine whether there is a “substantial possibility” that such an impact may occur.¹⁹⁶ While a court’s “task is to ensure NEPA compliance with the environmental policies,” it may not infringe on an agency’s decision where it has expertise.¹⁹⁷ “[T]he only role for the court is to insure that the agency has considered the environmental consequences.”¹⁹⁸

When the court is unsure whether the project will significantly affect the quality of the environment, “the appropriate remedy is to remand the case to the agency to correct the deficiencies in the record and in its analysis.”¹⁹⁹ A court may require the agency to reassess its NEPA analysis “in light of the proper

¹⁹⁵ See *id.* at 13.

¹⁹⁶ *Id.* at 18.

¹⁹⁷ *Id.* at 19.

¹⁹⁸ *Strycker’s Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227 (1980) (reviewing an agency’s consideration of alternatives to a planned project, and finding that once the agency has considered the environmental consequences, the court may not interfere with the agency’s choice of which action is to be taken).

¹⁹⁹ *National Audubon Soc’y*, 132 F.3d at 18.

standards.”²⁰⁰ Thus, an agency may be ordered to prepare new NEPA-compliant documentation “under circumstances that ensure an objective evaluation” free of the pressures that are present when an agency has already undertaken to conduct a project.²⁰¹

IV. DISCUSSION

Plaintiffs now claim that while the newly-produced EA has to some extent addressed the impact of the HDP on the RI/FS, and provides a coordination plan, the Corps has nonetheless failed to take a hard look at the impact the HDP will have on the RI/FS. Specifically, plaintiffs assert that the Corps has neglected to examine, among other things: (1) the possible impacts on EPA’s ability to characterize the site’s risk through sampling, including whether pre-dredging samples will remain relevant after the HDP has dispersed sediments and altered flow in the channels, (2) the alternatives that would mitigate those possible impacts, (3) “possible impacts on remedial options,” and (4) “possible impacts

²⁰⁰ *Fritiofson v. Alexander*, 772 F.2d 1225, 1248 (5th Cir. 1985) (a court may order the preparation of an EIS if it finds that the project may have significant effect on human environment; in absence of such an express finding, the proper remedy is to remand the decision to the agency to reconsider its determination of known significant environmental impact in light of the proper standards).

²⁰¹ *Metcalf*, 214 F.3d at 1146 (remanding the case to the agency with directions to conduct the NEPA process objectively and in good faith though leaving the decision of *how* to conduct such a review to the agency’s discretion).

from berth-deepening as part of the HDP and maintenance dredging.”²⁰² Plaintiffs further contend that the Corps’ data is inadequate for its intended purpose and that the Corps’ methodology is flawed.²⁰³ Finally, plaintiffs argue that the coordination plan fails to address the nature, content, mechanisms, and monitoring provisions necessary for real coordination.²⁰⁴

The Corps and Intervenors oppose plaintiffs’ request for relief on three grounds. *First*, they argue that plaintiffs’ request is not ripe because of the ongoing review of the Draft EA and Draft Amendment. *Second*, the Corps asserts that it has now taken a hard look at the possible impacts of the HDP on the RI/FS and cured any violations, making plaintiffs’ claim moot. *Third*, the Corps and Intervenors argue that injunctive relief is inappropriate as plaintiffs have not shown irreparable harm.

A. Ripeness

During the original round of briefing in the remedy phase, the Corps asked that judicial review of the Draft EA and Draft Amendment be withheld so that it could complete the Final EA and Amendment, issue a final decision

²⁰² Pl. Mem. at 7.

²⁰³ See 12/8/05 Transcript at 24.

²⁰⁴ See DeFur Decl. ¶ 18.

document, receive the requisite water quality certificate from the New Jersey Department of Environmental Protection under the Clean Water Act, and solicit the next contract for the HDP.²⁰⁵ The Final EA was published in January 2006. As of February 16, 2006, the Corps had not received its water quality certificates.²⁰⁶ In addition, it promised not to award the next contract until the Court's ruling.²⁰⁷

The harm plaintiffs will suffer here is procedural²⁰⁸ and such harm accrues when the NEPA document is issued, not when action is taken or contracts issued. Thus, the lack of certification and contracting here does not affect the ripeness of plaintiffs' claim. The Final EA is the Corps' last step in the NEPA process. Judicial review was withheld until this document was published and both sides were given a chance to file supplementary briefs. Any further delay in review would not serve the goals of NEPA. Accordingly, plaintiffs' claim is ripe.

²⁰⁵ See Def. Mem. at 19.

²⁰⁶ See 2/16/06 Memorandum for Record, NBSA Coordination Team Meeting, USACE IV: 0022612.

²⁰⁷ See *id.*

²⁰⁸ See *Lujan*, 504 U.S. at 573 ("[P]rocedural rights' are special: The person who has been accorded a procedural right to protect his concrete interests can assert that right without meeting all the normal standards for redressability and immediacy.").

B. The Merits of Plaintiffs’ NEPA Claim

The first question is whether the Corps has cured its NEPA violations thereby mooted plaintiffs’ claim for injunctive relief. To make this determination, the Court must assess whether the Corps has now taken a hard look at the potential impacts of the HDP on the RI/FS and “convincingly documented its decision.”²⁰⁹ Plaintiffs claim the Final EA still fails to do that and that the FONSI is arbitrary and capricious because it ignores likely significant impacts.²¹⁰ Plaintiffs assert that the Corps relies on faulty data to determine the “effects of dredge-induced resuspension on the distribution of contaminated sediment within the Superfund site.”²¹¹ The Corps contends that it has taken a hard look and that it has “evaluated the public comments in a reasonable and prudent manner.”²¹²

Because the Corps’ EA was prepared after the decision to proceed with the HDP was made, there is a substantial risk of post-hoc rationalization.²¹³

²⁰⁹ *Rye v. Skinner*, 907 F.2d 23, 24 (2d Cir. 1990).

²¹⁰ *See* Pl. Supp. Mem. at 1.

²¹¹ Pl. Mem. at 11.

²¹² Def. Supp. Mem. at 1.

²¹³ *See Metcalf*, 214 F.3d 1135, 1145 (holding that because an agency entered into a firm commitment to conduct a project before an EA was completed, the agency failed to take a “hard look” at the environmental consequences of its actions).

The Corps originally asked that judicial review be suspended until it could solicit the next contract for the HDP, suggesting a desire to avoid any interference with its planned contracting as a result of NEPA compliance.²¹⁴ Intervenors have also staked enormous investments on the expeditious completion of the HDP.²¹⁵ Though the Corps has conducted several planning and coordination meetings with the EPA and promised to postpone issuing the next HDP contract until this Court’s order, two of its dredging projects have already begun.²¹⁶

There is a fine line between legitimate responses to public comment and post-hoc rationalization designed to justify a decision that has already been made. During the remedy phase, the Corps voluntarily conducted a NEPA review and prepared an EA. Once the Draft EA and Draft Amendment were published

²¹⁴ See Def. Mem. at 19.

²¹⁵ Intervenor Donjon has “invested approximately \$6 million to purchase, construct, and permit its facility” and “\$23 million in the acquisition of new and the refurbishing of already-owned equipment” in anticipation of winning contracts related to dredging projects in Newark Bay. Intervenor Donjon Marine, Inc.’s Memorandum of Law in Opposition to Plaintiffs’ Request for Injunctive Relief (“Donjon Mem.”) at 4. Container Terminal stated that any delay in the HDP would cause a substantial loss in jobs, personal income, and state and local tax revenues. See Intervenor New York Container Terminal, Inc.’s Memorandum of Law in Opposition to Plaintiffs’ Request for Injunctive Relief (“Container Terminal Mem.”) at 3.

²¹⁶ See 12/8/05 Transcript at 11-12. See also *supra* notes 41-43 and accompanying text.

and the Corps received public comment on those documents, the Corps assessed the comments and took several of them into account. The Corps also responded to complaints in plaintiffs' original briefs when preparing the Final EA.²¹⁷ However, most of the new matter in the Final EA consists of further explanations for decisions that were made long ago.²¹⁸

In sum, a review of the Final EA reveals a continued noncompliance with NEPA and a failure to take a hard look at the impact of the HDP on the RI/FS. *First*, it failed to take a hard look at the effect of resuspension on contaminant concentrations in the surface level sediments for two reasons: (1) it failed to assess resuspension rates for different geomorphic areas and arbitrarily relied on the use of averaging over each contract area; and (2) it did not identify and consider hot spots. *Second*, the Corps failed to assess the cumulative impact of maintenance dredging on the RI/FS. *Third*, the EA lacked a proper alternatives analysis. *Finally*, the Corps' mitigation measures do not provide substantial assurance that possible impacts will be minimized.

²¹⁷ The dispute resolution mechanism in the coordination plan, for example, is likely a direct response to plaintiffs' allegation that the original plan did not include such a mechanism.

²¹⁸ See, e.g., Amendment to the EA at 23, USACE IV: 0022132.

1. Assessment of the Potential Impacts of the HDP on the RI/FS

a. Resuspension and the Amount of Contaminants Below the Surface

Plaintiffs argue that the Final EA fails to address potential adverse impacts of the HDP on the RI/FS by making “unsubstantiated” or “illogical assertions concerning the patterns of sediment resuspension and dispersion.”²¹⁹ In particular, plaintiffs note that the EA “assumes a uniform historical deposition rate in the flats over time and space” and that it “fails to consider the side slopes as a discrete area from the flats.”²²⁰ Plaintiffs also contend that the EA fails to adequately account for many potential hot spots and their effect on the resuspension analysis.²²¹

The RI/FS is designed to study the distribution and concentration of dioxin and other contaminants in the sediment of the NBSA, evaluate the uptake of contaminants by aquatic biota, identify contaminant concentrations in the food

²¹⁹ Pl. Supp. Mem. at 3.

²²⁰ *Id.*

²²¹ See *id.* at 2 (while the EA addresses the issue of hot spots, it arbitrarily asserts that they are “few in number, limited in size, and present limited potential for adverse impacts”).

web, and locate “hot spots” for short term remedial action.²²² The objectives of sampling include estimating “the approximate depth of a critical ‘horizon’ in the sediment bed” and preliminarily identifying “‘hot spots’ through statistical analyses.”²²³

Several of the EA’s conclusions regarding resuspension and the amount of contaminants below the surface prejudge exactly the questions the RI/FS is meant to address by making assumptions about the average contaminant levels and the presence and/or size of hot spots. After a thorough review of the Final EA, I conclude that the Corps has still failed to take a hard look at the resuspension of sediment and contaminants caused by dredging. Specifically, the Corps has failed to take a hard look at (1) the possibility of different average resuspension rates in the various geomorphic areas as opposed to the average rates throughout a contract area, calculated without providing a separate analysis for channels, flats, and transitional areas, and (2) the existence and effect of hot spots.

(1) Averaging and the Selection of Areas for Study

The EA’s assessment of the potential impact of sediment resuspension on sampling is overly narrow. The RIWP will conduct sampling in

²²² See RIWP at ES-6, 4-1, USACE III: 002108, 59.

²²³ *Id.* at ES-6, USACE III: 0021159.

the channels, sub-tidal flats, and in the transitional areas between the sub-tidal flats and navigational channels in order to “obtain data to characterize the horizontal and vertical distribution of COPCs in sediments.”²²⁴ The EA purports to analyze the horizontal and vertical distribution of COPCs in sediments as well by assessing whether the concentration of contaminants below the surface is greater than that on the surface throughout the NBSA.²²⁵ But, the EA does not distinguish between different geomorphic areas, such as tidal flats and transitional areas.²²⁶ Nor does the EA give a reason for failing to analyze resuspension rates in different geomorphic areas.

The RIWP notes that “the behavior and stability of sediments . . . present in the transitional areas between the Navigation Channels and the Sub-tidal Flats is largely unknown.”²²⁷ As plaintiffs’ expert explains, “however large or small the area . . . across which the resuspended sediments deposit, the depositional thickness will not be uniform throughout the area since resuspended sediments will not settle uniformly over the flats due to the complexity of the

²²⁴ *Id.* at ES-6, 6-5, USACE III: 0021159, 249.

²²⁵ *See* Amendment to the EA at 19, USACE IV: 0022128.

²²⁶ *See id.* at 11, USACE IV: 0022120.

²²⁷ RIWP at 6-15, USACE III: 0021260.

flows in these areas.”²²⁸ In order to gain more information about this issue, the RIWP seeks to analyze whether deposition rates in the transitional slopes are more rapid than in the navigational channels or in the tidal flats and whether “the surface sediment chemistry [in transitional areas] reflect similar inputs as other geomorphic areas.”²²⁹

Instead of acknowledging that it lacks sufficient data to address the possible difference in deposition rates or surface sediment chemistry in the transitional areas, the Corps uses the data from different geomorphic areas interchangeably. For example when the EA notes that there is a “relative paucity of data in the northeast portion of the region under study” the EA states that this lack of information was “mitigated by the availability of USACE cores along the edges of contract area S-NB-1.”²³⁰

The failure to distinguish between data from different geomorphic areas is exacerbated by the Corps’ use of averaging. Although the Corps noted the problem with using averages to make broad generalizations about resuspension

²²⁸ Declaration of Dr. W. Frank Bohlen, Professor of Marine Science at the University of Connecticut, in Support of Plaintiffs’ Request for Injunctive Relief ¶ 10.

²²⁹ RIWP at 6-16, USACE III: 0021261.

²³⁰ Amendment to the EA at 31, USACE IV: 0022140.

rates and its effect on surface level contamination, it then failed to address whether the use of averaging was appropriate. Instead, it relied on averages of the cores it studied across the contract areas. Its own analysis undercuts the assumption that averages across contract areas are appropriate. For example, the Corps relies on the “spatial variability in existing surface sediment concentrations” in order to conclude that a possible 15% increase in the amount of DDT on the surface of the sediment “is unlikely to affect the RI/FS significantly.”²³¹ But the EA gives no indication that the Corps assessed the variations in concentrations of surface sediments throughout a contract area or in different geomorphic regions.

The EA also fails to consider the potentially different risks posed by resuspension in the tidal flats, the transitional areas, and the channels. The failure to separately analyze resuspension rates for different geomorphic areas results in the failure to effectively analyze resuspension rates caused by the HDP. This prevents informed public comment. And, as a result, the Court lacks sufficient information to assess whether there is a substantial possibility that the project could significantly affect the quality of the human environment.

(2) Hot Spots

Nor is there any real analysis of hot spots in the Final EA. One

²³¹ *Id.* at 29-30, USACE IV: 0022138-39.

purpose of Phase 1 sampling in the RI/FS is to define “likely ‘hot spot[s].’”²³² The Corps only assessed the possibility of hot spots with respect to TCDD. Plaintiffs, in contrast, assessed the potential for hot spots of other contaminants besides TCDD and found “a substantial number of potential hot spots in the channels, often in clusters indicating a potentially larger size.”²³³

Plaintiffs also contend that the Corps’ identification of potential TCDD hot spots was based on an arbitrary standard. The EA sets a value of 200 parts per trillion (“ppt”) for identifying TCDD hot spots and finds that the hot spots were limited in number.²³⁴ The EA does not provide a basis for the use of the 200 ppt benchmark. According to plaintiffs, 100 ppt is still “ten times the maximum level deemed safe for exposure to marine organisms.”²³⁵ A “larger number of potential dioxin hot spots” with a greater “potential spacial extent” would be evident in the channels if the Corps had looked at samples with TCDD concentrations of 100 ppt or higher.²³⁶

²³² RIWP at 4-13, USACE III: 0021220.

²³³ Pl. Supp. Mem. at 3.

²³⁴ *See* Amendment to the EA at 23, USACE IV: 0022132.

²³⁵ Pl. Supp. Mem. at 2-3.

²³⁶ *Id.* at 3. *Compare* Amendment to the EA at 23, USACE IV: 0022132 (noting that out of 103 historical samples three exhibited “relatively high” TCDD

The identification of hot spots is critically important because the contaminants in those areas could be targeted for quick remedial action.²³⁷ However, as plaintiffs point out, if the hot spots are disturbed by dredging, resuspension and later deposition of the contaminants may disperse one hot spot and create a new one elsewhere. The Final EA’s attempt to dispose of the hot spots issue fails because it does not analyze (1) the scope of the hot spots, (2) whether the resuspension of contaminants other than TCDD will increase the surface concentration of each contaminant, or (3) whether resuspension of contaminants from hot spots is likely to result in new hot spots elsewhere.

b. Cumulative Impact

Plaintiffs also assert that the EA ignores the “cumulative effects” of maintenance dredging.²³⁸ The Corps responded to plaintiffs’ earlier comments by noting that resedimentation from maintenance dredging “will remain localized and

concentrations of greater than 200 ppt) *with* Declaration of Megan Y. Lew, Program Assistant at the NRDC, in Further Support of Plaintiffs’ Request for Injunctive Relief ¶ 11 (noting that “out of 47 discrete sampling locations (representing 74 total samples) . . . seven have concentrations greater than or equal to 100 ppt”).

²³⁷ See RIWP at 4-1, USACE III: 0021208 (noting that hot spots could be identified for “potential short-term action”).

²³⁸ Pl. Mem. at 16.

will not overlap with or accumulate on the resedimentation resulting from the deepening work.”²³⁹ Plaintiffs argue that the “channels slated for maintenance dredging are directly adjacent to the channels included in the HDP” and that the EA’s assumption regarding localized resuspension is “new and completely unsubstantiated.”²⁴⁰

The EA’s sole analysis of maintenance dredging focuses on whether samples taken from the areas slated for maintenance dredging will be affected. The EA concludes that the usefulness of those samples will not be affected by maintenance dredging because they were taken *prior* to the dredging.²⁴¹ It also concludes that future sampling in those areas can be coordinated with the maintenance dredging. But this conclusion is contradicted by the Corps’ admission elsewhere in the EA that dredging performed after sampling has the potential to affect the usefulness of those samples. For example, the Corps admitted that in areas adjacent to the dredged areas “dredging may indirectly affect the interpretation of the data from these sediment cores by causing contaminated

²³⁹ Response to Comment: NRDC Letter to the Corps dated August 15, 2005 at 9, Appendix D, Amendment to the EA, USACE IV: 0022363.

²⁴⁰ Pl. Supp. Mem. at 3-4.

²⁴¹ See Amendment to the EA at 39, USACE IV: 0022158.

sediments from the channels to be resuspended and deposited onto the sediment surface areas where such cores will be taken.”²⁴² This observation is equally applicable to resuspension caused by maintenance dredging.

The EA also fails to look at the cumulative effects of maintenance dredging on samples taken in areas *adjacent* to the maintenance dredging. To assess whether maintenance dredging would have a cumulative effect on the RI/FS the Corps would need to consider whether resuspension in areas being dredged will accumulate with resuspension from maintenance dredging and increase the level of resuspended sediment to such an extent that the EA’s conclusions regarding the amount of contamination that would be redeposited on the surface are no longer valid. The EA fails to take a hard look at whether resuspension caused by maintenance dredging will add to the resuspension caused by the HDP and at the cumulative effects of resedimentation from maintenance dredging that occurs in areas adjacent to or near the HDP dredging.

2. Alternatives

Plaintiffs claim that the Corps failed to consider all reasonable

²⁴² Def. Mem. at 7. *See also* Amendment to the EA at 13, USACE IV: 0022122.

alternatives to the proposed HDP for minimizing the effects on the RI/FS.²⁴³ Plaintiffs had originally suggested improving dredging protocols, by, for example, setting restrictions on the speed at which the dredging bucket is lowered, instituting independent inspections of the contractors' compliance with dredging protocols, and establishing a more formal coordination plan.²⁴⁴ In response, the Corps refashioned its analysis regarding best management practices for navigational dredging as an “alternatives” analysis. The Corps then claimed that the best management practices suggested by the plaintiffs were either adopted or found to be “unnecessary at the present time (albeit worthy of further analysis) or disadvantageous.”²⁴⁵ Plaintiffs also claim, however, that the Final EA, while it addresses suggested dredging protocols, fails to consider “big picture” alternatives which would “alter the Corps’ overall approach.”²⁴⁶

The EA’s alternatives analysis is notable for what it discusses and for what it fails to discuss. On the one hand, the analysis assesses best management practices for dredging. The Corps considered multiple dredging protocols for the

²⁴³ See Pl. Supp. Mem. at 7.

²⁴⁴ See Pl. Mem. at 19-20.

²⁴⁵ Def. Supp. Mem. at 3.

²⁴⁶ Pl. Supp. Mem. at 7.

HDP and while it postponed research into certain practices (such as use of positioning software), the EA provides an analysis of the benefits and harms of each protocol and the reasons for the adoption or rejection of each. On the other hand, the analysis does not discuss alternatives to the recommended course of action, including the preferred alternative²⁴⁷ and the no action alternative. Instead, it notes summarily that the “no action alternative” was discussed in the 1999 FEIS. The EA provides no explanation for its failure to discuss these alternatives.

Plaintiffs note at least three potential alternatives that could have been studied. *First*, the Corps could have obtained and analyzed “critical sediment data that is forthcoming from [the] EPA before proceeding with contracts with the [NBSA].”²⁴⁸ *Second*, the Corps could use the more detailed site-specific data obtained by the EPA to locate hot spots and to determine the level of care before dredging.²⁴⁹ *Third*, the Corps could have considered conducting “remedial dredging.”²⁵⁰ As plaintiffs note, the application of the Corps’ own Regulation – Hazardous, Toxic and Radioactive Waste (“HTRW”) Guidance for Civil Work

²⁴⁷ See *supra* note 149 and accompanying text.

²⁴⁸ Pl. Supp. Mem. at 7; Declaration of Dr. Peter L. DeFur in Further Support of Plaintiffs’ Request for Injunctive Relief ¶ 31.

²⁴⁹ See Pl. Supp. Mem. at 7.

²⁵⁰ See *id.*

Projects²⁵¹ – would have ensured that dredging in this HDP met standards for environmental remediation.²⁵²

The HTRW Regulation sets procedures “to facilitate early identification and appropriate consideration of HTRW problems during a project” and directs the Corps to “identify and evaluate alternatives to respond to verified HTRW problems which cannot be avoided by project design.”²⁵³ The key to whether these extra steps must be taken is whether or not the project involves HTRW. According to the Regulation, “dredged material and sediment beneath navigable waters proposed for dredging” qualify as HTRW when they are “within the boundaries of a site designated by the EPA or a state for response action (either a removal action or a remedial action) under CERCLA.”²⁵⁴ The Corps’ reasons for dismissing the applicability of the HTRW Regulation have evolved

²⁵¹ See Enclosure A, HTRW Guidance for Civil Works Projects, Appendix C, EA, USACE IV: 002085.

²⁵² See Pl. Supp. Mem. at 7. See also 8/15/05 Letter from Lawrence Levine to Ronald Pinzon at 20, USACE I: 0020314-15.

²⁵³ Civil Works Engineer Regulation 1165-2-132 ¶¶ 5,8 (Jun. 26, 1992), AR 1: 233. For example, during the feasibility phase of a project, if HTRW is identified, “at least one alternative plan should be formulated to avoid HTRW sites to the maximum extent possible, consistent with project objectives.” *Id.* ¶ 8.

²⁵⁴ Civil Works Engineer Regulation 1165-2-132 ¶ 4, AR 1: 233.

during this litigation, but they are ultimately unconvincing.²⁵⁵ The application of remedial dredging measures to the HDP, as contemplated by the HTRW Regulation, was a reasonable alternative which could have been considered.

The purpose of the EA was to review the possibility that the RI/FS would be significantly affected by the HDP. Analysis of alternatives to the

²⁵⁵ Where the Corps originally dismissed the HTRW Regulation by stating that “[c]urrently, no part of the HDP occurs within the limits of the CERCLA (Superfund) site,” the EA now acknowledges that the dredging locations in the Newark Bay and in parts of the Arthur Kill and Kill van Kull are part of the Study Area. *Compare* Draft EA at 4, USACE I: 0020093 *with* EA at 8, USACE IV: 0022012 (noting that “dredging project areas . . . that coincide with the southern half of the [NBSA] account for approximately forty six percent of the HDP area”). The Superfund Site has been expanded to include the NBSA. *See* Amendment to the EA at 2-3, USACE IV: 0022111; Final National Priorities List (NPL) Sites Environmental Protection Agency, Region 9 (last updated Feb. 8, 2006), available at

<http://www.epa.gov/superfund/sites/query/queryhtm/nplfin1.htm> (“The Diamond Alkali Superfund Site includes the former pesticides manufacturing plant and surrounding properties at 80 and 120 Lister Avenue in Newark, New Jersey, the Lower Passaic River Study Area, the Newark Bay Study Area and the extent of contamination.”). The EA now asserts that the material is not HTRW because it has yet to be classified by the EPA as a hazardous substance under CERCLA and that the Corps must wait until the RI results in a Record of Decision (a public document that explains which cleanup alternatives will be used) to determine whether the dredged material consists of HTRW. *See* EA at 6, USACE IV: 002210; Application of HTRW Regulation to Corps navigation deepening dredging in NBSA at 6, Appendix C, EA, USACE IV: 0022080. For dredged material, the HTRW Regulation does not require a record of decision or the designation of a hazardous substance. In fact, the HTRW Regulation states that dredged material qualifies as HTRW if it is part of a site designated for remedial action under CERCLA, as this site is.

recommended course of action are at the heart of a NEPA document.²⁵⁶ The EA should have included alternatives to the recommended course of action (the HDP), each of which would have had more or less of an impact on the RI/FS. The Corps was not required to address the precise alternatives suggested by plaintiffs. But, it was required to discuss sufficient alternatives to allow it to make a reasoned choice as to how to proceed with the HDP in light of the EPA’s ongoing study and remediation efforts. Instead, the EA relies on a restructured discussion of best management practices and the 1999 FEIS, which did not consider the impacts of dredging on the RI/FS, for its alternatives analysis. The EA once again fails to discuss alternatives, in violation of NEPA.

3. Mitigation

The final question is whether the Corps carefully addressed the form that coordination between the EPA and the Corps will take, as well as how the effectiveness of that coordination will be monitored. Plaintiffs urged the Corps to establish a clearly documented and effective coordination plan with a mechanism for problem-solving.²⁵⁷ During the course of this litigation, the Corps adopted a coordination plan to ensure that any impacts on the RI/FS will be “identified,

²⁵⁶ See 40 C.F.R. § 1502.14.

²⁵⁷ See DeFur Decl. ¶ 21.

avoided, and minimized to the fullest extent possible.”²⁵⁸ In addition, the Final EA provides information about monitoring the HDP, as described above.

Plaintiffs now claim that the EA’s coordination plan and the plan’s dispute resolution process amount to merely a “business as usual” approach which fails to set standards for resolving disputes and allows work to continue even while a dispute is pending.²⁵⁹ Plaintiffs also claim that the monitoring plan leaves the “public to speculate about [its] adequacy.”²⁶⁰

The coordination plan is a commendable addition to the EA, yet several questions remain. At present, coordination has allowed the sampling to proceed with minimal interference from the HDP. However, though the Corps intends to share data it gathers with the EPA, the coordination plan does not establish standards allowing the Corps to alter its dredging plan based on data it will receive from the EPA. Nor does it appear that any possible alterations to the plan, should it prove faulty, were proposed, researched, or subjected to public comments.

The EA makes several promises that it will alter its monitoring plan

²⁵⁸ Coordination Plan, USACE IV: 0022284.

²⁵⁹ Pl. Supp. Mem. at 10.

²⁶⁰ *Id.*

should it prove necessary. For example, the EA relies on a general promise that it will “as appropriate, reevaluate, the need for altering its dredging methods” in the NBSA through the use of its coordination plan and monitoring program.²⁶¹ The EA also explains that the Corps will follow “adaptive management practices as it moves through construction of its contracts,” thus allowing it to change future contracts should the data indicate it is necessary.²⁶² These promises, however, provide no assurance as to the efficacy of the mitigation measures. The Corps did not provide a proposal for monitoring how effective “adaptive management” would be. Nor did it give serious consideration to the adoption of alternatives to the dredging protocols should it need to reevaluate the ones currently in use.²⁶³

The most important question is whether the coordination plan and monitoring are sufficient to ensure that the RI samples are relevant for preparation and possible execution of the remedial phase of the RI/FS. In an email which was included in the remedy phase documents, a key member of the coordination team, EPA Project Manager Elizabeth Butler, told the Corps that the HDP will probably delay the EPA’s ability to take remedial actions:

²⁶¹ Addendum to Appendix B, EA, USACE IV: 0022057-69.

²⁶² EA at 15, USACE IV: 0022019.

²⁶³ See *National Audubon Soc'y*, 132 F.3d at 17.

given your dredging activities I'm not sure what else we might do, except possibly some hot spot removals in the flats perhaps or some capping in the northern part of the bay where dredging is not a routine element. However I can say that other than any interim measures we would more than likely not be doing any final remediation until after your 50 ft project is complete.²⁶⁴

The concern that final remediation must await the completion of the HDP is serious. The monitoring and coordination plans are intended to lessen the impact of the HDP on the RI/FS. But it is not at all clear whether the coordination and monitoring will truly minimize those impacts. The two projects are to be conducted in the same location and their goals are in conflict. The HDP's goal is to remove sediment as cheaply and quickly as possible in order to allow bigger and better ships to use the Harbor. The EPA's plan is aimed at careful selection and removal of contaminated sediment in that identical area. The Corps has still failed to adequately address how these projects can proceed simultaneously without threatening the timely remediation of the NBSA.

4. Conclusions Regarding NEPA Violations

The Corps had almost five months since the August 5 Opinion to produce and study the data it would need to decide whether the HDP would have a

²⁶⁴ See 12/16/05 Email from Elizabeth Butler, EPA Project Manager, to Thomas Shea, Corps Project Manager, USACE IV: 002455.

significant impact on the RI/FS. It nonetheless continues to rely on incomplete data, faulty assumptions, and unreliable averages. The lack of data also makes it impossible for the Corps to decide whether an SEIS is necessary and for the Court to determine whether there is a substantial possibility that the project could significantly affect the quality of the human environment. Under these circumstances, the Corps has not cured the violations previously found by the Court, and the FONSI was arbitrary and capricious.

C. Remedy

1. Irreparable Harm

In deciding whether to grant the requested injunction, this Court must determine whether ongoing dredging and contracting for the HDP is likely to irreparably harm the RI/FS. According to plaintiffs, the possible impacts that could flow from the dredging may require the EPA to re-sample data. Thus, plaintiffs claim that there is a risk that the dredging will (1) cause substantial delay in implementation of the RI/FS, (2) make it difficult to identify responsible parties, (3) increase the cost of study and remedy, and (4) jeopardize the effectiveness of cleanup by foreclosing cleanup options and/or delaying the implementation of the selected plan.²⁶⁵ Plaintiffs argue that current dredging is likely to jeopardize the

²⁶⁵ See Pl. Mem. at 23; Pl. Supp. Mem. at 4.

later usefulness of the sampling.²⁶⁶ Defendants claim that it is “insufficient for plaintiffs to argue that the HDP will make the RI/FS process more difficult, more costly, or more time consuming.”²⁶⁷ Rather, plaintiffs must prove that the “purported adverse effects of the HDP on the RI/FS process cannot be overcome.”²⁶⁸

The risk of harm to the implementation of a clean up plan is real. The Corps admits that if removal of sediment affects the utility of surface samples, more samples will need to be taken in other areas, such as recently dredged areas.²⁶⁹ This would undoubtedly delay the preparation of the FS. Particularly disturbing is the indication that remediation under the RI/FS might have to wait until certain stages of the HDP are completed.²⁷⁰

However, it is not clear that the threat of *irreparable* harm is actual *and* imminent. The Corps has met regularly with the EPA and the two agencies have shared schedules for sampling and dredging and have discussed the data

²⁶⁶ See Pl. Supp. Mem. at 4.

²⁶⁷ Def. Mem. at 33.

²⁶⁸ *Id.*

²⁶⁹ See Amendment to the EA at 8, USACE IV: 0022119.

²⁷⁰ See 12/16/05 Email from Elizabeth Butler to Thomas Shea.

obtained through sampling that has already taken place.²⁷¹ The EPA has moved several sampling locations based on information about dredging activities.²⁷² The Corps and the EPA have regularly shared information regarding dredging and sampling locations.²⁷³ Sampling has thus continued in areas which have not been dredged. Furthermore, it is not at all clear that the potential harm to the FS cannot be managed or remediated by the Corps and the EPA.

2. The Balance of Effects and the Public Interest

Intervenors argue that the balance of equities weighs against granting an injunction. Container Terminal notes that the public impact of an injunction will be great, causing loss of jobs and tax revenue in the New York and New Jersey Port. Container Terminal estimates that if the HDP is delayed past 2010,²⁷⁴ thousands of port jobs will be lost, regional personal income will decrease by

²⁷¹ See 12/12/05-12/19/05 Emails between Elizabeth Butler and David Glaser, Vice President and Senior Managing Scientist at Quantitative Environmental Analysis, LLC, USACE IV: 0022453-54.

²⁷² See Amendment to the EA at 13, USACE IV: 0022122.

²⁷³ See, e.g., 1/11/06 Memorandum for Record, NBSA Coordination Team Meeting; 2/16/06 Memorandum for Record, NBSA Coordination Team Meeting, USACE IV: 0022591, 0022612.

²⁷⁴ Cf. Limited Reevaluation Report, Cost Engineering at 48, Appendix H, 2004 EA, AR 5: 002377 (estimating that the Newark Bay portion of the 50-foot HDP will not be completed until 2012).

hundreds of millions of dollars, and tax revenue will also decline by tens of millions of dollars.²⁷⁵ Container Terminal also notes that if the HDP is delayed or halted, more shipments would need to be brought into the area by truck and that would increase air pollution and traffic congestion.²⁷⁶ In addition, if larger ships cannot enter the Port, “lightering” (a process of transferring shipments to smaller and lighter ships for transportation into the harbor) would increase, heightening the risk of an accident.²⁷⁷ Finally, Container Terminal points out that there are environmental risks in allowing the sediment to remain in the harbor.²⁷⁸ Donjon also argues that the “suspension of future contracts” will “idle equipment, cause layoffs of personnel who anticipated employment through the course of the entire HDP” and “prevent Donjon from recouping its huge investment.”²⁷⁹

While continuation of economic development in the Port and the completion of the HDP will certainly benefit the region, the dire predictions of

²⁷⁵ See Container Terminal Mem. at 3 (predicting losses of six thousand to twenty-nine thousand port related jobs, \$354 million to \$1.56 billion of regional personal income, and \$56 million to \$246 million of state and local tax revenue).

²⁷⁶ See *id.* at 4.

²⁷⁷ See *id.* at 5.

²⁷⁸ See *id.*

²⁷⁹ Donjon Mem. at 6.

Donjon and Container Terminal are somewhat overstated. Plaintiffs do not request that the HDP be discontinued, but only that it be delayed until the completion of NEPA-compliant documentation. Intervenors do not estimate the loss of investments, jobs, and tax revenue if there were a limited delay of three to nine months.²⁸⁰

Container Terminal also notes that allowing the contaminated sediment to remain in the environment would harm the public. Plaintiffs agree but for an entirely different reason. From plaintiffs' perspective, if the dredging skews the EPA's sampling analysis, the contamination is likely to remain in the environment longer due to the harm this will cause to the FS, and the related delay to final remediation.

In addition, even if an SEIS takes twelve months, the only contracts that would be affected by this delay would be the contracts in the NBSA scheduled during that period.²⁸¹ Some of the HDP contracts are for areas outside the NBSA

²⁸⁰ Container Terminal equates delay with failure. *See Declaration of Frank M. McDonough, President of the New York Shipping Association, Inc., in Support of Container Terminal ¶ 9* ("a loss in cargo because of a failure or even delay (which is tantamount to failure) in construction of the HDP will general significant losses").

²⁸¹ *See Declaration of Dr. Robert Stearns, independent consultant, in Support of Plaintiffs' Request for Injunctive Relief ¶ 7.*

and could be expedited while the contracts in the NBSA are postponed. For example, as plaintiffs' expert points out, "the accessibility of deep draft ships [to Container Terminal] depends on the deepening of channels outside the NBSA" and the Corps has "ample opportunity to mitigate any impacts" by adjusting its dredging schedule between contract areas.²⁸²

3. Adequacy of Legal Remedies

The discussion of irreparable harm, public interest, and the balance of equities is premature, however, because the plaintiffs are not without a legal remedy: remand. The question of whether the HDP will have significant adverse impacts on the RI/FS is one that the Corps must decide. Here, the Corps already prepared an EA to assess the possible impacts of the HDP on the RI/FS. The Corps has demonstrated that it is willing to look at the effects of the HDP. Though the EA did not cure the Corps' NEPA violations, there is no indication that a remand to the Corps with instructions to correct the remaining deficiencies in the EA and a careful timetable for those corrections will be disregarded. At least in the short term an injunction is not warranted. A remand strikes a delicate balance between the need to enforce NEPA's procedural guarantees and the equitable considerations cited by the Corps and Intervenors.

²⁸² *Id.* ¶¶ 12, 17.

On remand, the Corps must consider the issues that were inadequately addressed in its Final EA, including alternatives to the projects and mitigation measures. After doing so, it should reconsider its FONSI in light of its additional investigation and the applicable legal standard.

The Corps should also take affirmative steps to ensure that its review is objective and made in good faith. The current atmosphere of ongoing dredging, complete with contractors who have intervened in this case and made substantial investments in the hopes of either winning dredging contracts and/or obtaining more container traffic, is not one which will reasonably allow the Corps to assess the potential environmental impacts of the HDP on the RI/FS. During the pendency of this remedy phase, the Corps voluntarily agreed to postpone contracting for the HDP. Thus, there is no reason to believe that the agency will not choose a manner for conducting its review that allows it to do so objectively and in good faith.²⁸³ Should a new EA again be challenged, the Corps will have to demonstrate that it has acted objectively and in good faith.²⁸⁴

In addition, work for the Corps' next planned maintenance dredging

²⁸³ See *Metcalf*, 214 F.3d at 1146 (“The manner of ensuring that the process for which we remand this case is accomplished objectively and in good faith shall be left to the relevant agencies.”).

²⁸⁴ See *id.*

contract is scheduled to begin in April.²⁸⁵ Thus, time is of the essence. On remand, the Corps must produce sufficient data to make a reasoned decision, within the next four months, as to whether an SEIS is necessary. This Court retains jurisdiction to consider a renewed request for injunctive relief at that time.

A remand for reconsideration of the EA rather than an injunction carefully balances judicial review of the procedures followed with the agency's independent decisionmaking power regarding the substantive issues before it.²⁸⁶ My review of the voluminous record reveals that the Corps has now made some progress towards addressing the interactions between the HDP and the RI/FS. In addition, the sampling planned by the EPA in the near future will aid and assist the Corps in taking a genuine hard look at the effects of dredging on resuspension, the hot spots, the appropriate use of averaging, and alternatives to the project. A remand in this case may improve the agency's decisionmaking processes and

²⁸⁵ See 11/9/05 Memorandum for Record: NBSA Coordination Team Meeting, Appendix C, Amendment to the EA, USACE IV: 0022282; 11/2/05 Letter from Grace Musumeci, Chief Environmental Review Section, EPA Region 2, to Ronald Pinzon at 1, Public Comment Letters and Responses to the June 30, 2005 Draft EA and the September 20, 2005 Draft Amendment to the EA, Appendix D, Amendment to the EA, USACE IV: 0022292 (noting that Phase 1 sampling was to have occurred in November 2005 and that sediment coring had already begun).

²⁸⁶ See *National Audubon Soc.*, 132 F.3d at 19.

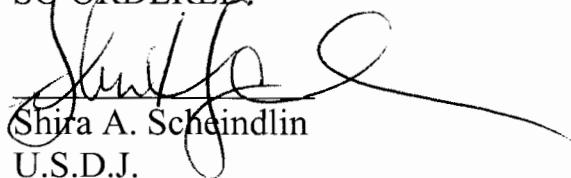
allow it to study the effects of dredging on the RI/FS by further coordination with the EPA. It may also encourage the Corps to continue its analysis based on the data being gathered by the EPA so as to not prejudge the very questions being asked by the EPA.

V. CONCLUSION

For the foregoing reasons, plaintiffs' request is granted in part and denied in part. Plaintiffs request for injunctive relief is denied. The EA is remanded to the Corps for reconsideration. The Corps is ordered to produce sufficient data to make a reasoned decision, within four months, as to whether an SEIS is necessary.

The Clerk of the Court is directed to close these motions (docket # 29, 41). This Court retains jurisdiction to determine whether the final NEPA documentation has cured the deficiencies noted in this opinion. A conference is scheduled for April 7, 2006 at 10:00 a.m. in courtroom 15C.

SO ORDERED:



Shira A. Scheindlin
U.S.D.J.

Dated: New York, New York
March 8, 2006

Glossary of Acronyms

AOC - Administrative Order on Consent
APA - Administrative Procedure Act
AR - Administrative Record
CEQ - Council on Environmental Quality
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
COPCs - Contaminants of Potential Concern
EA - Environmental Assessment
EIS - Environmental Impact Statement
EPA - United States Environmental Protection Agency
FEIS - Final Environmental Impact Statement
FONSI - Finding of No Significant Impact
HARS - Historic Area Remediation Site
HDP - Harbor Deepening Project
HTRW - Hazardous, Toxic and Radioactive Waste
NBSA - Newark Bay Study Area
NEPA - National Environmental Policy Act
NRDC - Natural Resources Defense Council
RI/FS - Remedial Investigation / Feasibility Study
RIWP - Remedial Investigation Work Plan
SEIS - Supplemental Environmental Impact Statement
TCDD - 2,3,7,8-tetrachlorodibenzo-p-dioxin
TSS - Total Suspended Sediment
USACE - United States Army Corps of Engineers Administrative Record Documents for Remedy Phase

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